EL834341252US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

O'Brien, Timothy J. et al.

Serial No.

Unassigned

Filing Date

September 27, 2001

For

REPEAT SEQUENCES OF THE CA125 GENE AND THEIR USE

FOR DIAGNOSTIC AND THERAPEUTIC INTERVENTIONS

Examiner

Unassigned

Group Art Unit

Unassigned

TRANSMITTAL OF VERIFIED STATEMENT FOR THE NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES AS REQUIRED BY 37 C.F.R. § 1.821(e)

Assistant Commissioner for Patents Washington, DC 20231

Sir:

Transmitted herewith is an original Sequence Listing which comprises nucleotide and amino acid sequences contained in the application as filed. Applicants include a paper copy of the Sequence Listing as well as a diskette which contains the computer readable form of the Sequence Listing. Pursuant to 37 C.F.R. § 1.821(e), the paper copy and computer readable form, are the same.

Respectfully submitted,

Date: September 27, 2001

Pat Winston Kennedy

Reg. No. 36,970

Kilpatrick Stockton LLP 1001 West Fourth Street Winston-Salem, NC 27101 Phone: (336) 607-7336 Facsimile: (336) 607-7500

Attorney Docket No.: 40715-260477

40715-260477 WINLIB01:909736.1 33)

SEQUENCE LISTING

<110> O'Brien, Timothy

 $\!<\!120\!>$ Repeat Sequences of the CA125 Gene and Their Use for Diagnostic and Therapeutic Interventions

<130> 40715-258841

<150> US 60/284,175

<151> 2001-04-17

<160> 306

1

£

<170> PatentIn version 3.0

<210> 1

<211> 13

<212> PRT

<213> Homo sapiens

<400> 1

Gln His Pro Gly Ser Arg Lys Phe Lys Thr Thr Glu Gly
1 5 10

<210> 2

<211> 11

<212> PRT

<213> Homo sapiens

<400> 2

Phe Leu Thr Val Glu Arg Val Leu Gln Gly Leu

- - 1

10 1 <210> 3 <211> 8 <212> PRT <213> Homo sapiens <400> 3 Asp Thr Tyr Val Gly Pro Leu Tyr <210> 4 <211> 8 <212> PRT <213> Homo sapiens <400> 4 Asp Gly Ala Ala Asn Gly Val Asp 5 <210> 5 <211> 240 <212> DNA <213> Homo sapiens <220> <221> CDS <222> (1)..(240) cgt cga cct ggc tct aga aag ttt aac acc acg gag aga gtc ctt cag 48 Arg Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln ggt ctg ctc agg cct gtg ttc aag aac acc agt gtt ggc cct ctg tac 96 Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr 20

<211> 80

<212> PRT

<213> Homo sapiens

<400> 6

Arg Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln
1 5 10 15

Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr 20 25 30

Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala 35 40 45

Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro 50 60

Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Gly Asp Ala 65 70 75 80

<210> 7

<211> 20

<212> DNA

<213> Artificial

<220>

<223> Synthetic Primer

<400> ggagagg	7 ggtt ctgcagggtc	20
<210>	8	
<211>	6	
<212>	PRT	
<213>	Artificial	
<220>		
<223>	Synthetic Primer	
<400>	8	
Glu Ar 1	g Val Leu Gln Gly 5	
<210>	9	
<211>	20	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Synthetic Primer	
<400> gtgaat	9 :ggta tcaggagagg	20
<210>	10	
<211>	6	
<212>	PRT	
<213>	Artificial	
<220>		
<223>	Synthetic Primer	
<400>	10	
Pro L	eu Leu Ile Pro Phe	

<210> 11

<211> 131

<212> PRT

<213> Homo sapiens

<400> 11

Glu Arg Val Leu Gln Gly Leu Leu Arg Ser Leu Phe Lys Ser Thr Ser

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu

Lys Asp Gly Thr Ala Thr Gly Val Asp Ala Ile Cys Thr His His Pro

Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ala Leu Asp 65 70 75 80

Asn Asp Ser Leu Phe Val Asn Gly Phe Thr His Arg Ser Ser Val Ser 85 90 95

Thr Thr Ser Thr Pro Gly Thr Pro Thr Val Tyr Leu Gly Ala Ser Lys
100 105 110

Thr Pro Ala Ser Ile Phe Gly Pro Ser Ala Ala Ser Pro Leu Leu Ile 115 120 125

Pro Phe Thr 130

<210> 12

<211> 130

<212> PRT

<213> Homo sapiens

<400> 12

Glu Arg Val Leu Gln Gly Leu Leu Met Pro Leu Phe Lys Asn Thr Ser 1 5 10 15

Val Ser Ser Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Asp Gly Ala Ala Thr Arg Ala Asp Ala Val Cys Thr His Arg Pro

45 40 35 Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg His Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Met Thr 85 Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg 105 Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Ile Pro Phe 130 <210> 13 <211> 132 <212> PRT <213> Homo sapiens <400> 13 Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Ile Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Ile His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly 105 Thr Pro Ser Ser Leu Ser Ser Pro Thr Ile Met Ala Ala Gly Pro Leu 120 115 Leu Ile Pro Phe 130

<210> 14

<211> 130

<212> PRT

<213> Homo sapiens

<400> 14

Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser 10 5

Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys Ser His Arg Leu 35 40 45

Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp 75 80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Ala 85

Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly 100 105

Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Ala Val Pro Leu Leu Ile 115 120 125

Pro Phe 130

<210> 15

<211> 130

<212> PRT

<213> Homo sapiens

<400> 15

Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Leu Phe Lys Asn Ser Ser

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Ile Ser Leu Arg Ser Glu 20 25 30

Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His His Leu 35 40

Asn Pro Gln Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Gln Leu 50 55 60

Ser Gln Met Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp 65 70 75 80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu 85 90 95

Thr Thr Ser Thr Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly 100 105

Thr Pro Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Phe Leu Ile 115 120 125

Pro Phe 130

<210> 16

<211> 130

<212> PRT

<213> Homo sapiens

<400> 16

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Ser Thr Ser 1 5 10

Ala Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu 35 40

Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu 50 55 60

Ser Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr Leu Asp 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro 85

Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly 100 105

Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Ile 115 120 125

Pro Phe 130 <210> 17

<211> 130

<212> PRT

<213> Homo sapiens

<400> 17

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser 1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Thr Leu Asp 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro 85 90 95

Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly
100 105 110

Thr Pro Ala Ser Leu Pro Gly His Ile Val Pro Gly Pro Leu Leu Ile 115 120 125

Pro Phe 130

<210> 18

<211> 131

<212> PRT

<213> Homo sapiens

<400> 18

Glu Arg Val Leu Gln Gly Leu Leu Thr Pro Leu Phe Lys Asn Thr Ser

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val 35 40 45

Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu 50 55 60

Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp 70 75 80

Arg Asp Ser Leu Tyr Val Asp Gly Phe Asn Pro Trp Ser Ser Val Pro 85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly 100 105 110

Thr Pro Ser Pro Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile 115 120 125

Pro Phe Thr 130

<210> 19

<211> 131

<212> PRT

<213> Homo sapiens

<400> 19

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser 1 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu 35 40 45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp 65 70 75 80

Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro 85 90 95

Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu 100 105 110

Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Val 115 120 125

Pro Phe Thr 130 <210> 20

<211> 130

<212> PRT

<213> Homo sapiens

<400> 20

Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu 20 25 30

Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro 35 40 45

Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro 85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly 100 105 110

Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile 115 120 125

Pro Phe 130

<210> 21

<211> 131

<212> PRT

<213> Homo sapiens

<400> 21

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr Ser 1 10 15

Ile Gly Pro Leu Tyr Ser Ser Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Asp Lys Ala Ala Thr Arg Val Asp Ala Ile Cys Thr His His Pro $35 \hspace{1cm} 40 \hspace{1cm} 45$

Asp Pro Gln Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp 70 75 80

Arg Asp Ser Leu Tyr Val Asp Gly Phe Thr His Trp Ser Pro Ile Pro 85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Ile Val Asn Leu Gly Thr Ser Gly 100 105 110

Ile Pro Pro Ser Leu Pro Glu Thr Thr Ala Thr Gly Pro Leu Leu Ile 115 120 125

Pro Phe Thr 130

<210> 22

<211> 282

<212> PRT

<213> Homo sapiens

<400> 22

Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu 20 25 30

Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro 35 40 45

Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu 50 55 60

Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp 70 75 80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro 85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly 100 105 110

Thr Pro Ser Ser Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Met 115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp 130 135 140

Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu

145 150 155 160 Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu 165 170 Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala 185 Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr 215 His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu 235 Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr 250 Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu 280 <210> 23 <211> 286 <212> PRT <213> Homo sapiens <400> 23 Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu Thr Thr Ser Thr Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly 100 105

Thr Pro Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Ile 115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn 130 135 140

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu 145 150 155 160

Gln Gly Leu Leu Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala 180 185 190

Ala Thr Arg Val Asp Ala Val Cys Thr Gln Arg Pro Asp Pro Lys Ser 195 200 205

Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr 210 215 220

His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg His Ser Leu 225 230 235 240

Tyr Val Asn Gly Leu Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr 245 250 255

Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser 260 265 270

Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Ile Pro Phe 275 280 285

<210> 24

<211> 250

<212> PRT

<213> Homo sapiens

<400> 24

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser 1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu $35 \hspace{1cm} 40 \hspace{1cm} 45$

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp 65 70 75 80 Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Thr Ser Val Pro 85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly 100 105 110

Thr Pro Phe Ser Leu Pro Ser Pro Ala Thr Ala Gly Pro Leu Leu Val

Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys Tyr Glu Glu Asp 130 135 140

Met His Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu 145 150 155 160

Gln Thr Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Ser Glu Lys Asp Gly Ala 180 185 190

Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser 195 200 205

Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr 210 215 220

Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu 225 230 235 240

Tyr Val Asn Gly Phe Thr His Trp Ile Pro 245 250

<210> 25

<211> 286

<212> PRT

<213> Homo sapiens

<400> 25

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser 1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu 35 40 45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp

80 70 75 65 Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro 90 Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile Pro Phe Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn 135 Met His His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu 145 Gln Gly Leu Leu Gly Pro Leu Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Ile Ser Leu Arg Ser Glu Lys Asp Gly Ala 180 Ala Thr Gly Val Asp Ala Ile Cys Thr His His Leu Asn Pro Gln Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Gln Leu Ser Gln Met Thr 215 210 Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu 235 230 Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu Thr Thr Ser Thr 245 Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro 265 Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Ile Pro Phe 280 <210> 26 <211> 286 <212> PRT <213> Homo sapiens <400> 26 Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu 35 40 45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp 70 75 80

Arg Gly Ser Leu Tyr Val Asn Gly Phe Ser Arg Gln Ser Ser Met Thr 85 90 95

Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg

Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Ile 115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn 130 135 140

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu 145 150 155 160

Gln Gly Leu Leu Asn Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Ser Leu Lys Pro Glu Lys Asp Gly Ala 180 185 190

Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg 195 200 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr 210 215 220

His Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu 225 230 235 240

Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Ala Pro Thr Ser Thr 245 250 255

Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser 260 265 270

Leu Pro Ser Pro Thr Thr Ala Val Pro Leu Leu Ile Pro Phe 275 280 285

<210> 27

<211> 286

<212> PRT

<213> Homo sapiens

<211> 286

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp 75 Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Phe Gly 105 Thr Pro Ala Ser Leu His Gly His Thr Ala Pro Gly Pro Val Leu Val 120 115 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp 135 Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu 155 150 Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu 170 Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala 185 Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr 215 Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu Thr Pro Ser Ser 260 Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile Pro Phe 280 <210> 28

<212> PRT

<213> Homo sapiens

<400> 28

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu $35 \hspace{1cm} 40 \hspace{1cm} 45$

Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu 50 55 60

Ser Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr Leu Asp 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro 85 90 95

Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly 100 105 110

Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Val 115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp 130 135 140

Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu 145 150 155 160

Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala 180 185 190

Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn 195 200 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr 210 215 220

Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu 225 230 235 240

Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr 245 250 255

Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu Thr Pro Ser Ser 260 265 270

Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile Pro Phe 275 280 285

<210> 29

<211> 281

<212> PRT

<213> Homo sapiens

<400> 29

Glu Arg Val Leu Gln Gly Leu Leu Thr Pro Leu Phe Lys Asn Thr Ser
1 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val 35 40 45

Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu 50 55 60

Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Trp Ser Ser Val Pro 85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly 100 105 110

Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile 115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn 130 135 140

Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu 145 150 155 160

Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala 180 185 190

Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser 195 200 205

Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr 210 215 220

Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu 225 230 235 240

Tyr Val Asn Gly Phe Thr His Trp Ile Pro Val Pro Thr Ser Ser Thr 245 250 255

Pro Gly Thr Ser Thr Val Asp Leu Gly Ser Gly Thr Pro Ser Ser Leu 260 265 270

Pro Ser Pro Thr Thr Ala Gly Pro Leu 275 280

<210> 30

<211> 217

<212> PRT

<213> Homo sapiens

<400> 30

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr Ser 1 10 15

Ile Gly Pro Leu Tyr Ser Ser Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Asp Lys Ala Ala Thr Arg Val Asp Ala Ile Cys Thr His His Pro

Asp Pro Gln Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp 65 70 75 80

Arg Asp Ser Leu Tyr Val Asp Gly Phe Thr His Trp Ser Pro Ile Pro 85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Ile Val Asn Leu Gly Thr Ser Gly 100 105 110

Ile Pro Pro Ser Leu Pro Glu Thr Thr Ala Thr Gly Pro Leu Leu Ile 115 120 125

Pro Phe Thr Pro Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp 130 135 140

Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala 180 185 190

Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg

195 200 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr 210 215

<210> 31

<211> 286

<212> PRT

<213> Homo sapiens

<400> 31

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser 1 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys 20 25 30

Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro 35 40 45

Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro 85 90 95

Thr Thr Ser Ile Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly 100 105 110

Thr Pro Val Ser Lys Pro Gly Pro Ser Ala Ala Ser Pro Leu Leu Val 115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp 130 135 140

Met His Arg Pro Gly Ser Arg Lys Phe Asn Ala Thr Glu Arg Val Leu 145 150 155 160

Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala 180 185 190

Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg 195 200 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr 210 215 220 His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu 225 230 235 240

Tyr Val Asn Gly Phe Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr 245 250 255

Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser 260 265 270

Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Ile Pro Phe 275 280 285

<210> 32

<211> 288

<212> PRT

<213> Homo sapiens

<400> 32

Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser 1 5 10 15

Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys 20 25 30

Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro 35 40 45

Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 50 60

Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro 85 90 95

Thr Thr Ser Ile Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly 100 105 110

Thr Pro Val Ser Lys Pro Gly Pro Ser Ala Ala Ser Pro Leu Leu Ile 115 120 125

Pro Phe Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn 130 135 140

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu 145 150 155 160

Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala 180 185 190 Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser 195 200 205

Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr 210 215 220

Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu 225 230 235 240

Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr 245 250 255

Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser 260 265 270

Leu Ser Ser Pro Thr Ile Met Ala Ala Gly Pro Leu Leu Ile Pro Phe 275 280 285

<210> 33

<211> 284

<212> PRT

<213> Homo sapiens

<400> 33

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser 1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro 35 40 45

Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Cys Glu Leu 50 55 60

Ser Gln Leu Thr His Asp Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro 85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly 100 105 110

Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile 115 120 125

Pro Phe Thr Phe Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn 130 135 140

Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu





25

145 150 155 160

Gln Gly Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Glu Ala 180 185 190

Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val Asp Pro Ile Gly 195 200 205

Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr 210 220

Asn Ser Ile His Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu 225 230 235 240

Tyr Val Asn Gly Phe Asn Pro Arg Ser Ser Val Pro Thr Thr Ser Thr 245 250 255

Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser 260 265 270

Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile 275 280

<210> 34

<211> 288

<212> PRT

<213> Homo sapiens

<400> 34

Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Ser Lys Asn Ser Ser 1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu

Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro $35 \hspace{1cm} 40 \hspace{1cm} 45$

Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp 65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro 85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly 100 105 110

Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile 115 120 125

Pro Phe Thr Val Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn 130 135 140

Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu 145 150 155 160

Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala 180 185 190

Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser 195 200 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr 210 215 220

Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu 225 230 235 240

Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr 245 250 255

Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser 260 265 270

Leu Ser Ser Pro Thr Ile Met Ala Ala Gly Pro Leu Leu Ile Pro Phe 275 280 285

<210> 35

<211> 274

<212> PRT

<213> Homo sapiens

<400> 35

Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser 1 5 10 15

Val Gly Ser Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Val Cys Thr His Arg Pro $35 \hspace{1cm} 40 \hspace{1cm} 45$

Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu 50 55 60

Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp 65 70 75 80 Arg His Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Met Thr 85 90 95

Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg 100 105 110

Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Val 115 120 125

Leu Phe Thr Ile Asn Phe Thr Ile Thr Asn Gln Arg Tyr Glu Glu Asn 130 135 140

Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu 145 150 155 160

Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala 180 185 190

Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser 195 200 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr 210 225 220

His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Gln Asp Arg Asp Ser Leu 225 230 235 240

Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile 245 250 255

Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser 260 265 270

Leu Pro

<210> 36

<211> 386

<212> PRT

<213> Homo sapiens

<400> 36

Glu Arg Val Leu Gl
n Gly Leu Leu Gly Pro Met Phe Lys As
n Thr Ser 1 5 10 15

Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu

35 40 45 Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 5.5 Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp 75 Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu 105 Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Ala 135 Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu 155 145 150 Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu 165 170 Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Ala Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr 215 His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Val Ser Leu 235 Tyr Val Asn Gly Phe Asn Pro Arg Ser Ser Val Pro Thr Thr Ser Thr 250 Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser 260 265 Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu 280 285 Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro 290 Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu 310 315 Arg Pro Leu Phe Lys Asn Thr Ser Ile Gly Pro Leu Tyr Ser Ser Cys 325 Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Lys Ala Ala Thr Arg Val 345

Asp Ala Ile Cys Thr His His Pro Asp Pro Gln Ser Pro Gly Leu Asn 355 360 365

Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Ile Thr 370 375 380

Glu Leu 385

<210> 37

<211> 438

<212> PRT

<213> Homo sapiens

<400> 37

Glu Arg Val Leu His Gly Leu Leu Thr Pro Leu Phe Lys Asn Thr Arg
1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val 35 40 45

Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu 50 55 60

Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp 65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Trp Ser Ser Val Pro 85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly 100 105 110

Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile 115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn 130 135 140

Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu 145 150 155 160

Gln Gly Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Phe Lys Pro Glu Lys His Glu Ala 180 185 190

Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly
195 200 205

Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr 210 215 220

Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu 225 230 235 240

Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile 245 250 255

Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser 260 265 270

Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu 275 280 285

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr 290 295 300

Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu 305 310 315 320

Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys 325 330 335

Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala Ala Thr Gly Val 340 345 350

Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn Pro Gly Leu Asp 355 360 365

Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Arg Gly Ile Ile 370 380

Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu Tyr Val Asn Gly 385 390 395 400

Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr Pro Gly Thr Ser 405 410 415

Thr Val His Leu Gly Thr Ser Glu Ile His Pro Ser Leu Pro Arg Pro 420 425 430

Ile Val Pro Gly Pro Leu 435

<210> 38

<211> 420

<212> PRT

<213> Homo sapiens

<400> 38

Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys

10 15 1 Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn 2.5 Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg 55 Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr 75 Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro 105 Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met 120 125 115 Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Ser Val Leu Gln 135 Gly Leu Leu Thr Pro Leu Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Ile Ser Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His His Leu Asn Pro Gln Ser Pro 185 Gly Leu Asp Arg Glu Gln Leu Tyr Trp Gln Leu Ser Gln Met Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr 215 Val Asn Gly Phe Thr His Arg Ser Leu Gly Leu Thr Thr Ser Thr Pro 235 225 230 Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro Val 245 250 Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn 260 Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro Gly 280 Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu Gln Gly Leu Leu Arg 290 Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg 315 305 310

Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp 325 330 335

Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg 340 345 350

Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu 355 360 365

Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe 370 375 380

Thr Gln Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Pro Thr 385 390 395 400

Val Asp Leu Gly Thr Ser Gly Thr Pro Val Ser Lys Pro Gly Pro Ser 405 410 415

Ala Ala Ser Pro 420

<210> 39

<211> 439

<212> PRT

<213> Homo sapiens

<400> 39

Glu Arg Val Leu Gln Gly Pro Leu Ser Pro Ile Phe Lys Asn Ser Ser $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu 20 25 30

Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro $35 \hspace{1cm} 40 \hspace{1cm} 45$

Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp 65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro 85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly 100 105 110

Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile 115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn 130 135 140

435

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Arg Val Leu 155 145 150 Gln Gly Leu Leu Asn Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu 170 Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala 185 Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Cys Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu 230 235 225 Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr 250 245 Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser 260 265 Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr 295 Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu 315 310 Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr Gly Val 340 Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp 360 Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Val Thr 370 375 Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly 390 395 Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser 405 Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly His 425 Thr Ala Pro Gly Pro Leu Leu

<210> 40

<211> 424

<212> PRT

<213> Homo sapiens

<400> 40

Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Tyr Thr His 20 25 30

Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp 35 40 45

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr 50 55 60

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr Ser 65 70 75 80

Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr 85 90 95

Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Ser Ala Gly Pro Leu 100 105 110

Leu Ile Pro Phe Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu 115 120 125

Glu Asn Met His His Pro Gly Ser Arg Lys Phe Asn Thr Met Glu Arg 130 135 140

Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly 145 150 155 160

Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp 165 170 175

Gly Val Ala Thr Arg Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro 180 185 190

Lys Ile Pro Gly Leu Asp Arg Gln Gln Leu Tyr Trp Glu Leu Ser Gln
195 200 205

Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp 210 215 220

Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro Thr Thr 225 230 235 240

Ser Thr Pro Gly Thr Phe Thr Val Gln Pro Glu Thr Ser Glu Thr Pro 245 250 255 Ser Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu Pro Phe 260 265 270

Thr Leu Asn Phe Thr Ile Ile Asn Leu Gln Tyr Glu Glu Asp Met His 275 280 285

Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly 290 295 300

Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser 305 310 315 320

Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr 325 330 335

Gly Val Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly 340 345 350

Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser 355 360 365

Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val 370 380

Asn Gly Phe Asn Pro Trp Ser Ser Val Pro Thr Thr Ser Thr Pro Gly 385 390 395 400

Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro 405 410 415

Gly His Thr Ala Pro Val Pro Leu 420

<210> 41

<211> 418

<212> PRT

<213> Homo sapiens

<400> 41

Thr Leu Leu Arg Pro Lys Lys Asp Gly Val Ala Thr Gly Val Asp Ala
1 5 10 15

Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu 20 25 30

Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu 35 40 45

Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr 50 55 60

His Gln Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Ser Thr Val

65					70					75					80
Asp	Leu	Arg	Thr	Ser 85	Gly	Thr	Pro	Ser	Ser 90	Leu	ı Ser	Ser	Pro	Thr 95	· Ile
Met	Ala	Ala	Gly 100		Leu	Leu	Ile	Pro 105		Thr	Ile	Asn	Phe 110		Ile
Thr	Asn	Leu 115		Tyr	Glu	Glu	Asn 120	Met	His	His	Pro	Gly 125		Arg	Lys
Phe	Asn 130	Thr	Met	Glu	Arg	Val 135	Leu	Gln	Gly	Leu	Leu 140		Pro	Leu	Phe
Lys 145	Asn	Thr	Ser	Val	Ser 150	Ser	Leu	Tyr	Ser	Gly 155		Arg	Leu	Thr	Leu 160
Leu	Arg	Pro	Glu	Lys 165	Asp	Gly	Ala	Ala	Thr 170	Arg	Val	Asp	Ala	Val 175	Cys
Thr	His	Arg	Pro 180	Asp	Pro	Lys	Ser	Pro 185	Gly	Leu	Asp	Arg	Glu 190	Arg	Leu
Tyr	Trp	Lys 195	Leu	Ser	Gln	Leu	Thr 200	His	Gly	Ile	Thr	Glu 205	Leu	Gly	Pro
Tyr	Thr 210	Leu	Asp	Arg	Asn	Ser 215	Leu	Tyr	Val	Asn	Gly 220	Phe	Thr	His	Arg
Ser 225	Ser	Met	Pro	Thr	Thr 230	Ser	Thr	Pro	Gly	Thr 235	Ser	Thr	Val	Asp	Val 240
Gly	Thr	Ser	Gly	Thr 245	Pro	Ser	Ser	Ser	Pro 250	Ser	Pro	Thr	Thr	Ala 255	Gly
Pro	Leu	Leu	Met 260	Pro	Phe	Thr	Leu	Asn 265	Phe	Thr	Ile	Thr	Asn 270	Leu	Gln
Tyr	Glu	Glu 275	Asp	Met	Arg	Arg	Thr 280	Gly	Ser	Arg	Lys	Phe 285	Asn	Thr	Met
Glu	Arg 290	Val	Leu	Gln	Gly	Leu 295	Leu	Lys	Pro	Leu	Phe 300	Lys	Ser	Thr	Ser
Val 305	Gly	Pro	Leu	Tyr	Ser 310	Gly	Cys	Arg	Leu	Thr 315	Leu	Leu	Arg	Pro	Glu 320
Lys	His	Gly	Ala	Ala 325	Thr	Gly	Val	Asp	Ala 330	Ile	Cys	Thr	Leu	Arg 335	Leu
Asp	Pro	Thr	Gly 340	Pro	Gly	Leu	Asp	Arg 345	Glu	Arg	Leu	Tyr	Trp 350	Glu	Leu
Ser	Gln	Leu 355	Thr	Asn	Ser		Thr 360	Glu	Leu	Gly	Pro	Tyr 365	Thr	Leu	Asp
Arg	Asp 370	Ser	Leu	Tyr		Asn 375	Gly	Phe	Thr		Arg 380	Ser	Ser	Val	Pro

Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly 385 390 395 400

Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Ile 405 410 415

Pro Phe

<210> 42

<211> 443

<212> PRT

<213> Homo sapiens

<400> 42

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser 1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Asp Gly Val Ala Thr Arg Val Asp Ala Ile Cys Thr His Arg Pro $35 \hspace{1cm} 40 \hspace{1cm} 45$

Asp Pro Lys Ile Pro Gly Leu Asp Arg Gln Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp 65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro 85 90 95

Thr Thr Ser Thr Pro Gly Thr Phe Thr Val Gln Pro Glu Thr Ser Glu
100 105 110

Thr Pro Ser Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu 115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Ile Asn Leu Gln Tyr Glu Glu Asp 130 135 140

Met His Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu 145 150 155 160

Gln Gly Leu Leu Met Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Gln Glu Ala 180 185 190

Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Ser Glu 195 200 205 Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr 210 215 220

Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu 225 230 235 240

Tyr Val Asn Gly Phe Thr His Ser Gly Val Leu Cys Pro Pro Ser 245 250 255

Ile Leu Gly Ile Phe Thr Val Gln Pro Glu Thr Phe Glu Thr Pro Ser 260 265 270

Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu Pro Phe Thr 275 280 285

Leu Asn Phe Thr Ile Ile Asn Leu Gln Tyr Glu Glu Asp Met His Arg 290 295 300

Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 305 310 315 320

Leu Met Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly 325 330 335

Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Gln Glu Ala Ala Thr Gly 340 345 350

Val Asp Thr Ile Cys Thr His Arg Val Asp Pro Ile Gly Pro Gly Leu 355 360 365

Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile 370 375 380

Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn 385 390 395 400

Gly Phe Asn Pro Trp Ser Ser Val Pro Thr Thr Ser Thr Pro Gly Thr 405 410 415

Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly 420 425 430

His Thr Ala Pro Val Pro Leu Leu Ile Pro Phe 435 440

<210> 43

<211> 442

<212> PRT

<213> Homo sapiens

<400> 43

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser

	1				5					10					15	
	Leu	Glu	Tyr	Leu 20	Tyr	Ser	Gly	Суѕ	Arg 25	Leu	Ala	Ser	Leu	Arg 30	Pro	Glu
	Lys	Asp	Ser 35	Ser	Ala	Met	Ala	Val 40	Asp	Ala	Ile	Cys	Thr 45	His	Arg	Pro
	Asp	Pro 50	Glu	Asp	Leu	Gly	Leu 55	Asp	Arg	Glu	Arg	Leu 60	Tyr	Trp	Glu	Let
	Ser 65	Asn	Leu	Thr	Asn	Gly 70	Ile	Gln	Glu	Leu	Gly 75	Pro	Tyr	Thr	Leu	Asp 80
	Arg	Asn	Ser	Leu	Tyr 85	Val	Asn	Gly	Phe	Thr 90	His	Arg	Ser	Ser	Met 95	Pro
	Thr	Thr	Ser	Thr 100	Pro	Gly	Thr	Ser	Thr 105	Val	Asp	Val	Gly	Thr 110	Ser	Gl
	Thr	Pro	Ser 115	Ser	Ser	Pro	Ser	Pro 120	Thr	Thr	Ala	Gly	Pro 125	Leu	Leu	Met
	Pro	Phe 130	Thr	Leu	Asn	Phe	Thr 135	Ile	Thr	Asn	Leu	Gln 140	Tyr	Glu	Glu	Asp
	Met 145	Arg	Arg	Thr	Gly	Ser 150	Arg	Lys	Phe	Asn	Thr 155	Met	Glu	Ser	Val	Leu 160
	Gln	Gly	Leu	Leu	Lys 165	Pro	Leu	Phe	Lys	Asn 170	Thr	Ser	Val	Gly	Pro 175	Leu
	Tyr	Ser	Gly	Cys 180	Arg	Leu	Thr	Leu	Leu 185	Arg	Pro	Lys	Lys	Asp 190	Gly	Ala
	Ala	Thr	Gly 195	Val	Asp	Ala	Ile	Cys 200	Thr	His	Arg	Leu	Asp 205	Pro	Lys	Ser
	Pro	Gly 210	Leu	Asn	Arg	Glu	Gln 215	Leu	Tyr	Trp	Glu	Leu 220	Ser	Lys	Leu	Thr
	Asn 225	Asp	Ile	Glu	Glu	Val 230	Gly	Pro	Tyr	Thr	Leu 235	Asp	Arg	Asn	Ser	Leu 240
	Tyr	Val	Asn	Gly	Phe 245	Thr	His	Arg	Ser	Phe 250	Val	Ala	Pro	Thr	Ser 255	Thr
	Leu	Gly	Thr	Ser 260	Thr	Val	Asp	Leu	Gly 265	Thr	Ser	Gly	Thr	Pro 270	Ser	Ser
	Leu	Pro	Ser 275	Pro	Thr	Thr	Gly	Val 280	Pro	Leu	Leu	Ile	Pro 285	Phe	Thr	Leu
1	Asn	Phe 290	Thr	Ile	Thr	Asn	Leu 295	Gln	Tyr	Glu	Glu	Asn 300	Met	Gly	His	Pro
	Gly 305	Ser	Arg	Lys	Phe	Asn 310		Met	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu

Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly Cys 325 330 335

Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Arg Val 340 345 350

Val Ala Val Cys Thr His Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp 355 360 365

Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr His Gly Ile Thr 370 375 380

Glu Leu Gly Pro Tyr Thr Leu Asp Arg His Ser Leu Tyr Val Asn Gly 385 390 395 400

Phe Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr Pro Asp Thr Ser 405 410 415

Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser Leu Ser Gly Pro 420 425 430

Thr Thr Ala Ser Pro Leu Leu Ile Pro Phe 435 440

<210> 44

<211> 442

<212> PRT

<213> Homo sapiens

<400> 44

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser 1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu 35 40 45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp 70 75 80

Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro 85 90 95

Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu 100 105 110

Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile 115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu 170 Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Ser Ser Thr Met Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu Asp 200 Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn Leu Thr 215 Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Phe Met Pro Thr Thr Ser Thr Leu Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser Ser Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Met Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu Ser Val Leu Gln Gly Leu Leu 315 310 Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys 325 330 Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Gly Val 345 Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu 375 Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Pro Arg Thr Ser Gly Thr Pro Ser Ser Leu Ser Ser Pro 420 425

Thr Ile Met Ala Ala Gly Pro Leu Leu Ile

435 440

<210> 45

<211> 379

<212> PRT

<213> Homo sapiens

<400> 45

Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$

Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys Ser His Arg Leu 35 40 45

Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp 70 75 80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Ala 85 90 95

Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly 100 105 110

Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Ala Val Pro Leu Leu Ile 115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys Tyr Glu Glu Asp 130 135 140

Met His Cys Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu 145 150 155 160

Gln Ser Leu Phe Gly Pro Met Phe Lys Asn Thr Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Phe Arg Ser Glu Lys Asp Gly Ala 180 185 190

Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser 195 200 205

Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr 210 215 220

Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu 225 230 235 240

Tyr Val Asn Gly Phe Thr His Gln Thr Ser Ala Pro Asn Thr Ser Thr 245 250 255

Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser 260 265 270

Leu Pro Ser Pro Thr Ser Ala Gly Pro Leu Leu Val Pro Phe Thr Leu 275 280 285

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr 290 295 300

Gly Ser Arg Lys Phe Asn Thr Met Glu Ser Val Leu Gln Gly Leu Leu 305 310 315

Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys 325 330 335

Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Val 340 345 350

Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn 355 360 365

Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu 370 375

<210> 46

<211> 439

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (1)..(439)

<223> Any "X" = any amino acid

<400> 46

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser 1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu 35 40 45

Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu

	50					55					60				
Ser 65	Gln	Leu	Thr	Asn	Ser 70	Val	Thr	Glu	Leu	Gly 75	Pro	Tyr	Thr	Leu	Asp 80
Arg	Asp	Ser	Leu	Tyr 85	Val	Asn	Gly	Phe	Thr 90	His	Arg	Ser	Ser	Val 95	Pro
Thr	Thr	Ser	Ile 100	Pro	Gly	Thr	Ser	Ala 105	Val	His	Leu	Glu	Thr 110	Ser	Gly
Thr	Pro	Ala 115	Ser	Leu	Pro	Gly	His 120	Thr	Ala	Pro	Gly	Pro 125	Leu	Leu	Ile
Pro	Phe 130	Thr	Leu	Asn	Phe	Thr 135	Ile	Thr	Asn	Leu	His 140	Tyr	Glu	Glu	Asn
Met 145	Gln	His	Pro	Gly	Ser 150	Arg	Lys	Phe	Asn	Thr 155	Met	Glu	Arg	Val	Leu 160
Gln	Gly	Cys	Leu	Val 165	Pro	Cys	Ser	Arg	Asn 170	Thr	Asn	Val	Gly	Leu 175	Leu
Tyr	Ser	Gly	Cys 180	Arg	Leu	Thr	Leu	Leu 185	Xaa	Xaa	Xaa	Xaa	Xaa 190	Xaa	Xaa
Xaa	Xaa	Xaa 195	Xaa	Xaa	Xaa	Xaa	Xaa 200	Xaa	Xaa	Xaa	Xaa	Xaa 205	Xaa	Xaa	Xaa
Xaa	Xaa 210	Xaa	Xaa	Xaa	Xaa	Xaa 215	Xaa	Xaa	Xaa	Xaa	Xaa 220	Xaa	Xaa	Xaa	Xaa
Xaa 225	Xaa	Xaa	Xaa	Xaa	Xaa 230	Gly	Pro	Tyr	Thr	Leu 235	Asp	Arg	Asn	Ser	Leu 240
Tyr	Val	Asn	Gly	Phe 245	Thr	His	Arg	Ser	Ser 250	Val	Ala	Pro	Thr	Ser 255	Thr
Pro	Gly	Thr	Ser 260	Thr	Val	Asp	Leu	Gly 265	Thr	Ser	Gly	Thr	Pro 270	Ser	Ser
Leu	Pro	Ser 275	Pro	Thr	Thr	Val	Pro 280	Leu	Leu	Val	Pro	Phe 285	Thr	Leu	Asn
Phe	Thr 290	Ile	Thr	Asn	Leu	Gln 295	Tyr	Gly	Glu	Asp	Met 300	Arg	His	Pro	Gly
Ser 305	Arg	Lys	Phe	Asn	Thr 310	Thr	Glu	Arg	Val	Leu 315	Gln	Gly	Leu	Leu	Gly 320
Pro	Leu	Phe	Lys	Asn 325	Ser	Ser	Val	Gly	Pro 330	Leu	Tyr	Ser	Gly	Cys 335	Arg
Leu	Ile	Ser	Leu 340	Arg	Ser	Glu	Lys	Asp 345	Gly	Ala	Ala	Thr	Gly 350	Val	Asp
Ala	Ile	Cys 355	Thr	His	His	Leu	Asn 360	Pro	Gln	Ser	Pro	Gly 365	Leu	Asp	Arg

Glu Gln Leu Tyr Trp Gln Leu Ser Gln Val Thr Asn Gly Ile Lys Glu 370 375 380

Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe 385 390 395 400

Thr His Arg Ser Ser Gly Leu Thr Thr Ser Thr Pro Trp Thr Ser Thr 405 410 415

Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro Val Pro Ser Pro Thr 420 425 430

Thr Ala Gly Pro Leu Leu Ile 435

<210> 47

<211> 1366

<212> PRT

<213> Homo sapiens

<400> 47

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser 1 10 15

Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu 20 25 30

Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro 35 40 45

Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu 50 55 60

Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp 65 70 75 80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro $85 \hspace{1cm} 90 \hspace{1cm} 95$

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly 100 105 110

Thr Pro Ser Ser Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Met 115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp 130 135 140

Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu 145 150 155 160

Gln Gly Pro Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu 230 Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr 250 Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser 265 Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro 295 Gly Ser Arg Lys Phe Asn Ile Thr Glu Arg Val Leu Gln Gly Leu Leu 315 Asn Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Met 340 345 Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp 360 Arg Glu Gln Leu Tyr Cys Glu Leu Ser Gln Leu Thr His Asn Ile Thr 375 Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser 405 Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe Pro Gly His 425 Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile 435 Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys 455 Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe 475 470 Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu

485 490 495 Leu Arg Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys 505 Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu 520 Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro 535 Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg 555 Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu 570 565 Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly 580 585 Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln 600 605 Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr 615 Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser 630 635 Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp 695 Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro 710 715 Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu 730 Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile 740 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Arg Val Leu 775 Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu 785 790 795

1085

1100

Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser Ser 810 805 Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu Asp 825 Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu 855 Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr 865 Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser Ser 890 Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Met Pro Phe Thr Leu 905 900 Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr 920 Gly Ser Arg Lys Phe Asn Thr Met Glu Ser Val Leu Gln Gly Leu Leu 935 Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu 1000 Glu Val Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn 1010 1015 1020 Gly Phe Thr His Arg Ser Phe Val Ala Pro Thr Ser Thr Leu Gly 1030 1035 Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser Leu 1040 1045 Pro Ser Pro Thr Thr Gly Val Pro Leu Leu Ile Pro Phe Thr Leu 1055 1060 Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu Gln Gly

1090

1105

Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Ser Leu Tyr

1110

Ser	Gly 1115	Cys	Arg	Leu	Thr	Leu 1120	Leu	Arg	Pro	Glu	Lys 1125	Asp	Gly	Ala
Ala	Thr 1130	Arg	Val	Asp	Ala	Val 1135	Cys	Thr	His	Arg	Pro 1140	Asp	Pro	Lys
Ser	Pro 1145	Gly	Leu	Asp	Arg	Glu 1150	Arg	Leu	Tyr	Trp	Lys 1155	Leu	Ser	Gln
Leu	Thr 1160	His	Gly	Ile	Ile	Glu 1165	Leu	Gly	Pro	Tyr	Thr 1170	Leu	Asp	Arg
His	Ser 1175	Phe	Tyr	Val	Asn	Gly 1180	Phe	Thr	His	Gln	Ser 1185	Ser	Met	Thr
Thr	Thr 1190	Arg	Thr	Pro	Asp	Thr 1195	Ser	Thr	Met	His	Leu 1200	Ala	Thr	Ser
Arg	Thr 1205	Pro	Ala	Ser	Leu	Ser 1210	Gly	Pro	Thr	Thr	Ala 1215	Ser	Pro	Leu
Leu	Val 1220	Leu	Phe	Thr	Ile	Asn 1225	Phe	Thr	Ile	Thr	Asn 1230	Gln	Arg	Tyr
Glu	Glu 1235	Asn	Met	His	His	Pro 1240	Gly	Ser	Arg	Lys	Phe 1245	Asn	Thr	Thr
Glu	Arg 1250	Val	Leu	Gln	Gly	Leu 1255	Leu	Arg	Pro	Val	Phe 1260	Lys	Asn	Thr
Ser	Val 1265	Gly	Pro	Leu	Tyr	Ser 1270	Gly	Cys	Arg	Leu	Thr 1275	Leu	Leu	Arg
Pro	Lys 1280	Lys	Asp	Gly		Ala 1285	Thr	Lys	Val	Asp	Ala 1290	Ile	Cys	Thr
Tyr	Arg 1295	Pro	Asp	Pro	Lys	Ser 1300	Pro	Gly	Leu	Asp	Arg 1305	Glu	Gln	Leu
Tyr	Trp 1310		Leu	Ser		Leu 1315		His	Ser	Ile	Thr 1320		Leu	Gly
Pro	Tyr 1325		Gln	Asp	Arg	Asp 1330		Leu	Tyr	Val	Asn 1335	Gly	Phe	Thr
His	Arg 1340	Ser	Ser	Val	Pro	Thr 1345	Thr	Ser	Ile	Pro	Gly 1350	Thr	Ser	Ala
Val	His 1355	Leu	Glu	Thr	Ser	Gly 1360	Thr	Pro	Ala	Ser	Leu 1365	Pro		
<210	0> 48	8												
<21	1> 1	148												
<212	42 P	RT												

<213> Homo sapiens

<400> 48

Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly Cys $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Arg Val 20 25 30

Asp Ala Val Cys Thr His Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp 35 40 45

Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr His Gly Ile Ile 50 55 60

Glu Leu Gly Pro Tyr Thr Leu Asp Arg His Ser Phe Tyr Val Asn Gly 65 70 75 80

Phe Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr Pro Asp Thr Ser 85 90 95

Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser Leu Ser Gly Pro 100 105 110

Thr Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn Phe Thr Ile 115 120 125

Thr Asn Gln Arg Tyr Glu Glu Asn Met His His Pro Gly Ser Arg Lys 130 135 140

Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Val Phe 145 150 155 160

Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu 165 170 175

Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys 180 185 190

Thr Tyr Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu 195 200 205

Tyr Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro 210 215 220

Tyr Thr Gln Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg 225 230 235 240

Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu 245 250 255

Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly Pro Ser Ala Ala Ser 260 265 270

Pro Leu Leu Val Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Arg 275 280 285

Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Arg Ser Leu Phe Lys Ser Thr Ser 310 315 Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 325 330 Lys Asp Gly Thr Ala Thr Gly Val Asp Ala Ile Cys Thr His His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 360 Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly His Tyr Ala Leu Asp 375 Asn Asp Ser Leu Phe Val Asn Gly Phe Thr His Arg Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Pro Thr Val Tyr Leu Gly Ala Ser Lys 405 410 Thr Pro Ala Ser Ile Phe Gly Pro Ser Ala Ala Ser His Leu Leu Ile 420 425 Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn 435 440 445 Met Trp Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln 455 Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr 475 Ser Gly Ser Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Glu Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Thr Gly Pro 505 Gly Leu Asp Arg Glu Gln Leu Tyr Leu Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr 535 Val Asn Gly Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Thr Gly 545 550 Val Val Ser Glu Glu Pro Phe Thr Leu Asn Phe Thr Ile Asn Asn Leu 570 Arg Tyr Met Ala Asp Met Gly Gln Pro Gly Ser Leu Lys Phe Asn Ile Thr Asp Asn Val Met Lys His Leu Leu Ser Pro Leu Phe Gln Arg Ser

595 600 605 Ser Leu Gly Ala Arg Tyr Thr Gly Cys Arg Val Ile Ala Leu Arg Ser 615 Val Lys Asn Gly Ala Glu Thr Arg Val Asp Leu Leu Cys Thr Tyr Leu 630 635 Gln Pro Leu Ser Gly Pro Gly Leu Pro Ile Lys Gln Val Phe His Glu 645 650 Leu Ser Gln Gln Thr His Gly Ile Thr Arg Leu Gly Pro Tyr Ser Leu 665 Asp Lys Asp Ser Leu Tr Leu Asn Gly Tyr Asn Glu Pro Gly Leu Asp Glu Pro Pro Thr Thr Pro Lys Pro Ala Thr Thr Phe Leu Pro Pro Leu 695 Ser Glu Ala Thr Thr Ala Met Gly Tyr His Leu Lys Thr Leu Thr Leu 705 715 Asn Phe Thr Ile Ser Asn Leu Gln Tyr Ser Pro Asp Met Gly Lys Gly 725 730 Ser Ala Thr Phe Asn Ser Thr Glu Gly Val Leu Gln His Leu Leu Arg 740 745 Pro Leu Phe Gln Lys Ser Ser Met Gly Pro Phe Tyr Leu Gly Cys Gln 760 Leu Ile Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Thr Thr Cys Thr Tyr His Pro Asp Pro Val Gly Pro Gly Leu Asp Ile Gln Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Val Thr Gln 810 Leu Gly Phe Tyr Val Leu Asp Arg Asp Ser Leu Phe Ile Asn Gly Tyr Ala Pro Gln Asn Leu Ser Ile Arg Gly Glu Tyr Gln Ile Asn Phe His 840 Ile Val Asn Trp Asn Leu Ser Asn Pro Asp Pro Thr Ser Ser Glu Tyr 850 855 Ile Thr Leu Leu Arg Asp Ile Gln Asp Lys Val Thr Thr Leu Tyr Lys 870 875 Gly Ser Gln Leu His Asp Thr Phe Arg Phe Cys Leu Val Thr Asn Leu Thr Met Asp Ser Val Leu Val Thr Val Lys Ala Leu Phe Ser Ser Asn 900 905

Leu Asp Pro Ser Leu Val Glu Gln Val Phe Leu Asp Lys Thr Leu Asn 915 920 925

Ala Ser Phe His Trp Leu Gly Ser Thr Tyr Gln Leu Val Asp Ile His 930 935 940

Val Thr Glu Met Glu Ser Ser Val Tyr Gln Pro Thr Ser Ser Ser 945 950 955 960

Thr Gln His Phe Tyr Leu Asn Phe Thr Ile Thr Asn Leu Pro Tyr Ser 965 970 975

Gln Asp Lys Ala Gln Pro Gly Thr Thr Asn Tyr Gln Arg Asn Lys Arg 980 985 990

Asn Ile Glu Asp Ala Leu Asn Gln Leu Phe Arg Asn Ser Ser Ile Lys 995 1000 1005

Ser Tyr Phe Ser Asp Cys Gln Val Ser Thr Phe Arg Ser Val Pro 1010 1015 1020

Asn Arg His His Thr Gly Val Asp Ser Leu Cys Asn Phe Ser Pro 1025 1030 1035

Leu Ala Arg Arg Val Asp Arg Val Ala Ile Tyr Glu Glu Phe Leu 1040 1045 1050

Arg Met Thr Arg Asn Gly Thr Gln Leu Gln Asn Phe Thr Leu Asp 1055 1060 1065

Arg Ser Ser Val Leu Val Asp Gly Tyr Ser Pro Asn Arg Asn Glu 1070 1080

Pro Leu Thr Gly Asn Ser Asp Leu Pro Phe Trp Ala Val Ile Leu 1085 1090 1095

Ile Gly Leu Ala Gly Leu Leu Gly Leu Ile Thr Cys Leu Ile Cys 1100 $$1105\$

Gly Val Leu Val Thr Thr Arg Arg Lys Lys Glu Gly Glu Tyr 1115 1120 1125

Asn Val Gln Gln Gln Cys Pro Gly Tyr Tyr Gln Ser His Leu Asp 1130 1135 1140

Leu Glu Asp Leu Gln 1145

<210> 49

<211> 6833

<212> DNA

<213> Homo sapiens

gagagggttc	tgcagggtct	gctcaaaccc	ttgttcagga	atagcagtct	ggaatacctc	60
tattcaggct	gcagactagc	ctcactcagg	ccagagaagg	atagctcagc	catggcagtg	120
gatgccatct	gcacacatcg	ccctgaccct	gaagacctcg	gactggacag	agagcgactg	180
tactgggagc	tgagcaatct	gacaaatggc	atccaggagc	tgggccccta	caccctggac	240
cggaacagtc	tctatgtcaa	tggtttcacc	catcgaagct	ctatgcccac	caccagcact	300
cctgggacct	ccacagtgga	tgtgggaacc	tcagggactc	catcctccag	ccccagcccc	360
acgactgctg	gccctctcct	gatgccgttc	accctcaact	tcaccatcac	caacctgcag	420
tacgaggagg	acatgcgtcg	cactggctcc	aggaagttca	acaccatgga	gagggttctg	480
cagggtccgc	ttagtcccat	attcaagaac	tccagtgttg	gccctctgta	ctctggctgc	540
agactgacct	ctctcaggcc	cgagaaggat	ggggcagcaa	ctggaatgga	tgctgtctgc	600
ctctaccacc	ctaatcccaa	aagacctggg	ctggacagag	agcagctgta	ctgggagcta	660
agccagctga	cccacaacat	cactgagctg	ggcccctaca	gcctggacag	ggacagtctc	720
tatgtcaatg	gtttcaccca	tcagaactct	gtgcccacca	ccagtactcc	tgggacctcc	780
acagtgtact	gggcaaccac	tgggactcca	tcctccttcc	ccggccacac	agagcctggc	840
cctctcctga	taccattcac	gctcaacttc	accatcacta	acctacagta	tgaggagaac	900
atgggtcacc	ctggctccag	gaagttcaac	atcacggaga	gggttctgca	gggtctgctt	960
aatcccattt	tcaagaactc	cagtgttggc	cctctgtact	ctggctgcag	actgacctct	1020
ctcaggcccg	agaaggatgg	ggcagcaact	ggaatggatg	ctgtctgcct	ctaccaccct	1080
aatcccaaaa	gacctgggct	ggacagagag	cagctgtact	gcgagctaag	ccagctgacc	1140
cacaacatca	ctgagctggg	cccctacage	ttggacaggg	acagtcttta	tgtcaatggt	1200
ttcacccatc	agaactctgt	gcccaccacc	agtactcctg	ggacctccac	agtgtactgg	1260
gcaaccactg	ggactccatc	ctccttcccc	ggccacacag	agcctggccc	tctcctgata	1320
ccattcaccc	tcaacttcac	catcaccaac	ctgcagtacg	aggaggacat	gcgtcgcact	1380
ggctccagga	agttcaacac	catggagagg	gttctgcagg	gtctgctcaa	gcccttgttc	1440
aagagcacca	gcgttggccc	tctgtactct	ggctgcagac	tgaccttgct	cagacctgag	1500
aaacatgggg	cagccactgg	agtggacgcc	atctgcaccc	tccgccttga	tcccactggt	1560
cctggactgg	acagagagcg	gctatactgg	gagctgagcc	agctgaccaa	cagcgttaca	1620
gagctgggcc	cctacaccct	ggacagggac	agtctctatg	tcaatggctt	cacccatcgg	1680
agctctgtgc	caaccaccag	tattcctggg	acctctgcag	tgcacctgga	aacctctggg	1740
actccagcct	ccctccctgg	ccacacagcc	cctggccctc	tcctggtgcc	attcaccctc	1800

aacttcacta tcaccaacct gcagtatgag gaggacatgc gtcaccctgg ttccaggaag 1860 ttcaacacca cggagagagt cctgcagggt ctgctcaagc ccttgttcaa gagcaccagt 1920 gttggccctc tgtactctgg ctgcagactg accttgctca ggcctgaaaa acgtggggca 1980 2040 agagagcagc tatactggga gctgagcaaa ctgacccgtg gcatcatcga gctgggcccc 2100 tacctcctgg acagaggcag tctctatgtc aatggtttca cccatcggaa ctttgtgccc 2160 atcaccagca ctcctgggac ctccacagta cacctaggaa cctctgaaac tccatcctcc 2220 ctacctagac ccatagtgcc tggccctctc ctgataccat tcacactcaa cttcaccatc 2280 actaacctac agtatgagga gaacatgggt caccctggct ccaggaagtt caacatcacg 2340 gagagggttc tgcagggtct gctcaaaccc ttgttcagga atagcagtct ggaatacctc 2400 tattcaggct gcagactaac ctcactcagg ccagagaagg atagctcaac catggcagtg 2460 gatgecatet geacacateg ecetgaceet gaagaceteg gaetggaeag agagegaetg 2520 tactgggage tgagcaatet gacaaatgge atccaggage tgggccccta caccetggae 2580 cggaacagte tetatgteaa tggttteace categaaget etatgeecae caccageact 2640 cctgggacct ccacagtgga tgtgggaacc tcagggactc catcctccag ccccagcccc 2700 acgactgetg geceteteet gatgeegtte acceteaact teaccateae caacetgeag 2760 tacgaggagg acatgcgtcg cactggctcc aggaagttca acaccatgga gagtgtcctg 2820 cagggtctgc tcaagccctt gttcaagaac accagtgttg gccctctgta ctctggctgc 2880 agattgacct tgctcaggcc caagaaagat ggggcagcca ctggagtgga tgccatctgc 2940 acccaccgcc ttgaccccaa aagccctgga ctcaacaggg agcagctgta ctgggagtta 3000 agcaaactga ccaatgacat tgaagaggtg ggcccctaca ccttggacag gaacagtctc 3060 tatgtcaatg gtttcaccca tcggagcttt gtggccccca ccagcactct tgggacctcc 3120 acagtggacc ttgggacctc agggactcca tcctccctcc ccagccccac aacaggtgtt 3180 cctctcctga taccattcac actcaacttc accatcacta acctacagta tgaggagaac 3240 atgggtcacc ctggctccag gaagttcaac atcatggaga gggttctgca gggtctgctt 3300 atgcccttgt tcaagaacac cagtgtcagc tctctgtact ctggttgcag actgaccttg 3360 ctcaggcctg agaaggatgg ggcagccacc agagtggttg ctgtctgcac ccatcgtcct 3420 gaccccaaaa gccctggact ggacagagag cggctgtact ggaagctgag ccagctgacc 3480 cacggcatca ctgagctggg cccctacacc ctggacaggc acagtctcta tgtcaatggt 3540

ttcacccatc	agagetetat	gacgaccacc	: agaactcctg	atacctccad	aatgcacctg	3600
gcaacctcga	gaactccagc	ctccctgtct	ggacctacga	ccgccagccc	: tctcctgata	3660
ccattcacaa	ttaacttcac	catcactaac	ctgcggtatg	aggagaacat	gcatcaccct	3720
ggctctagaa	agtttaacac	cacggagaga	gtccttcagg	gtctgctcag	gcctgtgttc	3780
aagaacacca	gtgttggccc	tctgtactct	ggctgcagac	tgaccttgct	caggcccaag	3840
aaggatgggg	cagccaccaa	agtggatgcc	atctgcacct	accgccctga	tcccaaaagc	3900
cctggactgg	acagagagca	gctatactgg	gagctgagcc	agctaaccca	cagcatcact	3960
gagctgggcc	cctacaccct	ggacagggac	agtctctatg	tcaatggttt	cacacagcgg	4020
agctctgtgc	ccaccactag	cattcctggg	acccccacag	tggacctggg	aacatctggg	4080
actccagttt	ctaaacctgg	tecetegget	gccagccctc	tcctggtgct	attcactctc	4140
aacttcacca	tcaccaacct	gcggtatgag	gagaacatgc	agcaccctgg	ctccaggaag	4200
ttcaacacca	cggagagggt	ccttcagggc	ctgctcaggt	ccctgttcaa	gagcaccagt	4260
gttggccctc	tgtactctgg	ctgcagactg	actttgctca	ggcctgaaaa	ggatgggaca	4320
gccactggag	tggatgccat	ctgcacccac	caccctgacc	ccaaaagccc	taggctggac	4380
agagagcagc	tgtattggga	gctgagccag	ctgacccaca	atatcactga	gctgggccac	4440
tatgccctgg	acaacgacag	cctctttgtc	aatggtttca	ctcatcggag	ctctgtgtcc	4500
accaccagca	ctcctgggac	ccccacagtg	tatctgggag	catctaagac	tccagcctcg	4560
atatttggcc	cttcagctgc	cagccatctc	ctgatactat	tcaccctcaa	cttcaccatc	4620
actaacctgc	ggtatgagga	gaacatgtgg	cctggctcca	ggaagttcaa	cactacagag	4680
agggtccttc	agggcctgct	aaggcccttg	ttcaagaaca	ccagtgttgg	ccctctgtac	4740
tctggctcca	ggctgacctt	gctcaggcca	gagaaagatg	gggaagccac	cggagtggat	4800
gccatctgca	cccaccgccc	tgaccccaca	ggccctgggc	tggacagaga	gcagctgtat	4860
ttggagctga	gccagctgac	ccacagcatc	actgagctgg	gcccctacac	actggacagg	4920
gacagtctct	atgtcaatgg	tttcacccat	cggagctctg	tacccaccac	cagcaccggg	4980
gtggtcagcg a	aggagccatt	cacactgaac	ttcaccatca	acaacctgcg	ctacatggcg	5040
gacatgggcc a	aacccggctc	cctcaagttc	aacatcacag	acaacgtcat	gaagcacctg	5100
ctcagtcctt 1	tgttccagag (gagcagcctg (ggtgcacggt	acacaggctg	cagggtcatc	5160
gcactaaggt o	ctgtgaagaa (eggtgetgag a	acacgggtgg a	acctcctctg	cacctacctg	5220
cageceetea q	geggeeeagg	cetgeetate a	aagcaggtgt 1	tccatgagct	gagccagcag	5280
acccatggca t	cacccggct (gggcccctac t	tctctggaca a	agacagcct	ctaccttaac	5340

ggttacaatg	aacctggtct	agatgagcct	cctacaactc	ccaagccagc	caccacattc	5400
ctgcctcctc	tgtcagaagc	cacaacagcc	atggggtacc	acctgaagac	cctcacactc	5460
aacttcacca	tctccaatct	ccagtattca	ccagatatgg	gcaagggctc	agctacattc	5520
aactccaccg	agggggtcct	tcagcacctg	ctcagaccct	tgttccagaa	gagcagcatg	5580
ggccccttct	acttgggttg	ccaactgatc	tccctcaggc	ctgagaagga	tggggcagcc	5640
actggtgtgg	acaccacctg	cacctaccac	cctgaccctg	tgggccccgg	gctggacata	5700
cagcagcttt	actgggagct	gagtcagctg	acccatggtg	tcacccaact	gggcttctat	5760
gtcctggaca	gggatagcct	cttcatcaat	ggctatgcac	cccagaattt	atcaatccgg	5820
ggcgagtacc	agataaattt	ccacattgtc	aactggaacc	tcagtaatcc	agaccccaca	5880
tcctcagagt	acatcaccct	gctgagggac	atccaggaca	aggtcaccac	actctacaaa	5940
ggcagtcaac	tacatgacac	attccgcttc	tgcctggtca	ccaacttgac	gatggactcc	6000
gtgttggtca	ctgtcaaggc	attgttctcc	tccaatttgg	accccagcct	ggtggagcaa	6060
gtctttctag	ataagaccct	gaatgcctca	ttccattggc	tgggctccac	ctaccagttg	6120
gtggacatcc	atgtgacaga	aatggagtca	tcagtttatc	aaccaacaag	cagctccagc	6180
acccagcact	tctacccgaa	tttcaccatc	accaacctac	catattccca	ggacaaagcc	6240
cagccaggca	ccaccaatta	ccagaggaac	aaaaggaata	ttgaggatgc	gctcaaccaa	6300
ctcttccgaa	acagcagcat	caagagttat	ttttctgact	gtcaagtttc	aacattcagg	6360
tctgtcccca	acaggcacca	caccggggtg	gactccctgt	gtaacttctc	gccactggct	6420
cggagagtag	acagagttgc	catctatgag	gaatttctgc	ggatgacccg	gaatggtacc	6480
cagctgcaga	acttcaccct	ggacaggagc	agtgtccttg	tggatgggta	ttctcccaac	6540
agaaatgagc	ccttaactgg	gaattctgac	cttcccttct	gggctgtcat	cttcatcggc	6600
ttggcaggac	tcctgggact	catcacatgc	ctgatctgcg	gtgtcctggt	gaccacccgc	6660
cggcggaaga	aggaaggaga	atacaacgtc	cagcaacagt	gcccaggcta	ctaccagtca	6720
cacctagacc	tggaggatct	gcaatgactg	gaacttgccg	gtgcctgggg	tgcctttccc	6780
ccagccaggg	tccaaagaag	cttggctggg	gcagaaataa	accatattgg	tcg	6833

<210> 50

<211> 2248

<212> PRT

<213> Homo sapiens

<400> 50

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser 1 10 15

Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu 20 30

Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro $35 \hspace{1cm} 40 \hspace{1cm} 45$

Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu 50 55 60

Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp 70 75 80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro 85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly 100 105 110

Thr Pro Ser Ser Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Met 115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp 130 135 140

Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu 145 150 155 160

Gln Gly Pro Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala 180 185 190

Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg 195 200 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr 210 215 220

His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu 225 230 235 240

Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr 245 250 255

Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser 260 265 270

Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu 275 280 285

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro 290 Gly Ser Arg Lys Phe Asn Ile Thr Glu Arg Val Leu Gln Gly Leu Leu 310 315 Asn Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly Cys 330 Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Met 345 Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp 360 Arg Glu Gln Leu Tyr Cys Glu Leu Ser Gln Leu Thr His Asn Ile Thr 375 Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly 395 Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser 405 Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile 435 Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys 455 Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe 470 475 Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys 500 Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro 535 Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu 570 Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly 580 Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln

595 600 605 Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr 615 Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 650 Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu 665 Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 680 Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp 695 Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro 715 Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu 725 730 Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile 740 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Arg Val Leu 775 Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser Ser 805 810 Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn Leu Thr 840 Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr 875 Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser Ser 885 890 Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Met Pro Phe Thr Leu 900 905 910

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu Ser Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys 955 Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Gly Val 965 Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn 980 Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu 1000 Glu Val Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn 1010 1015 Gly Phe Thr His Arg Ser Phe Val Ala Pro Thr Ser Thr Leu Gly 1035 Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser Leu 1040 1045 1050 Pro Ser Pro Thr Thr Gly Val Pro Leu Leu Ile Pro Phe Thr Leu 1060 Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His 1070 1075 Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu Gln Gly 1085 1090 Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Ser Leu Tyr 1100 1105 1110 Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala 1115 1120 Ala Thr Arg Val Asp Ala Val Cys Thr His Arg Pro Asp Pro Lys 1130 1135 Ser Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln 1145 1155 Leu Thr His Gly Ile Ile Glu Leu Gly Pro Tyr Thr Leu Asp Arg 1165 1170 His Ser Phe Tyr Val Asn Gly Phe Thr His Gln Ser Ser Met Thr 1175 1180 1185 Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser 1190 1195 1200 Arg Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu 1205 1210 1215

Leu	Val 1220	Leu	Phe	Thr	Ile	Asn 1225	Phe	Thr	Ile	Thr	Asn 1230	Gln	Arg	Tyr
Glu	Glu 1235	Asn	Met	His	His	Pro 1240	Gly	Ser	Arg	Lys	Phe 1245	Asn	Thr	Thr
Glu	Arg 1250	Val	Leu	Gln	Gly	Leu 1255	Leu	Arg	Pro	Val	Phe 1260	Lys	Asn	Thr
Ser	Val 1265	Gly	Pro	Leu	Tyr	Ser 1270	Gly	Cys	Arg	Leu	Thr 1275	Leu	Leu	Arg
Pro	Lys 1280	Lys	Asp	Gly	Ala	Ala 1285	Thr	Lys	Val	Asp	Ala 1290	Ile	Cys	Thr
Tyr	Arg 1295	Pro	Asp	Pro	Lys	Ser 1300	Pro	Gly	Leu	Asp	Arg 1305	Glu	Gln	Leu
Tyr	Trp 1310		Leu	Ser	Gln	Leu 1315		His	Ser	Ile	Thr 1320		Leu	Gly
Pro	Tyr 1325	Thr	Gln	Asp	Arg	Asp 1330	Ser	Leu	Tyr	Val	Asn 1335	Gly	Phe	Thr
His	Arg 1340	Ser	Ser	Val	Pro	Thr 1345	Thr	Ser	Ile	Pro	Gly 1350	Thr	Ser	Ala
Val	His 1355	Leu	Glu	Thr	Ser	Gly 1360	Thr	Pro	Ala	Ser	Leu 1365	Pro	Gly	Pro
Ser	Ala 1370	Ala	Ser	Pro	Leu	Leu 1375	Val	Leu	Phe	Thr	Leu 1380	Asn	Phe	Thr
Ile	Thr 1385	Asn	Leu	Arg		Glu 1390		Asn	Met	Gln	His 1395	Pro	Gly	Ser
Arg	Lys 1400	Phe	Asn	Thr	Thr	Glu 1405	Arg	Val	Leu	Gln	Gly 1410	Leu	Leu	Arg
Ser	Leu 1415		Lys	Ser		Ser 1420		Gly	Pro		Tyr 1425		Gly	Cys
Arg	Leu 1430	Thr	Leu	Leu	Arg	Pro 1435	Glu	Lys	Asp	Gly	Thr 1440	Ala	Thr	Gly
Val	Asp 1445	Ala	Ile	Cys	Thr	His 1450	His	Pro	Asp	Pro	Lys 1455	Ser	Pro	Arg
Leu	Asp 1460	Arg	Glu	Gln	Leu	Tyr 1465	Trp	Glu	Leu	Ser	Gln 1470	Leu	Thr	His
Asn	Ile 1475	Thr	Glu	Leu	Gly	His 1480	Tyr	Ala	Leu	Asp	Asn 1485	Asp	Ser	Leu
Phe	Val 1490	Asn	Gly	Phe	Thr	His 1495	Arg	Ser	Ser	Val	Ser 1500		Thr	Ser
Thr	Pro	Gly	Thr	Pro	Thr	Val	Tyr	Leu	Gly	Ala	Ser	Lys	Thr	Pro

	1505					1510					1515			
Ala	Ser 1520	Ile	Phe	Gly	Pro	Ser 1525	Ala	Ala	Ser	His	Leu 1530	Leu	Ile	Leu
Phe	Thr 1535	Leu	Asn	Phe	Thr	Ile 1540	Thr	Asn	Leu	Arg	Tyr 1545	Glu	Glu	Asn
Met	Trp 1550	Pro	Gly	Ser	Arg	Lys 1555	Phe	Asn	Thr	Thr	Glu 1560	Arg	Val	Leu
Gln	Gly 1565	Leu	Leu	Arg	Pro	Leu 1570	Phe	Lys	Asn	Thr	Ser 1575	Val	Gly	Pro
Leu	Tyr 1580	Ser	Gly	Ser	Arg	Leu 1585	Thr	Leu	Leu	Arg	Pro 1590	Glu	Lys	Asp
Gly	Glu 1595	Ala	Thr	Gly	Val	Asp 1600	Ala	Ile	Cys	Thr	His 1605	Arg	Pro	Asp
Pro	Thr 1610	Gly	Pro	Gly	Leu	Asp 1615	Arg	Glu	Gln	Leu	Tyr 1620	Leu	Glu	Leu
Ser	Gln 1625	Leu	Thr	His	Ser	Ile 1630	Thr	Glu	Leu	Gly	Pro 1635	Tyr	Thr	Leu
Asp	Arg 1640	Asp	Ser	Leu	Tyr	Val 1645	Asn	Gly	Phe	Thr	His 1650	Arg	Ser	Ser
Val	Pro 1655	Thr	Thr	Ser	Thr	Gly 1660	Val	Val	Ser	Glu	Glu 1665	Pro	Phe	Thr
Leu	Asn 1670	Phe	Thr	Ile	Asn	Asn 1675	Leu	Arg	Tyr	Met	Ala 1680	Asp	Met	Gly
Gln	Pro 1685	Gly	Ser	Leu	Lys	Phe 1690	Asn	Ile	Thr	Asp	Asn 1695	Val	Met	Lys
His	Leu 1700	Leu	Ser	Pro	Leu	Phe 1705	Gln	Arg	Ser	Ser	Leu 1710	Gly	Ala	Arg
Tyr	Thr 1715	Gly	Cys	Arg	Val	Ile 1720	Ala	Leu	Arg	Ser	Val 1725	Lys	Asn	Gly
Ala	Glu 1730	Thr	Arg	Val	Asp	Leu 1735	Leu	Cys	Thr	Tyr	Leu 1740	Gln	Pro	Leu
Ser	Gly 1745	Pro	Gly	Leu	Pro	Ile 1750	Lys	Gln	Val	Phe	His 1755	Glu	Leu	Ser
Gln	Gln 1760	Thr	His	Gly	Ile	Thr 1765	Arg	Leu	Gly	Pro	Tyr 1770	Ser	Leu	Asp
Lys	Asp 1775	Ser	Leu	Tyr	Leu	Asn 1780	Gly	Tyr	Asn	Glu	Pro 1785	Gly	Leu	Asp
Glu	Pro 1790	Pro	Thr	Thr	Pro	Lys 1795	Pro	Ala	Thr	Thr	Phe 1800	Leu	Pro	Pro

	Ser	- 2												
	1805	Glu	Ala	Thr	Thr	Ala 1810	Met	Gly	Tyr	His	Leu 1815	Lys	Thr	Leu
	Leu 1820	Asn	Phe	Thr	Ile	Ser 1825	Asn	Leu	Gln	Tyr	Ser 1830	Pro	Asp	Met
	Lys 1835	Gly	Ser	Ala	Thr	Phe 1840	Asn	Ser	Thr	Glu	Gly 1845	Val	Leu	Gln
	Leu 1850	Leu	Arg	Pro	Leu	Phe 1855	Gln	Lys	Ser	Ser	Met 1860	Gly	Pro	Phe
	Leu 1865	Gly	Cys	Gln	Leu	Ile 1870	Ser	Leu	Arg	Pro	Glu 1875	Lys	Asp	Gly
	Ala 1880	Thr	Gly	Val	Asp	Thr 1885	Thr	Cys	Thr	Tyr	His 1890	Pro	Asp	Pro
	Gly 1895	Pro	Gly	Leu	Asp	Ile 1900	Gln	Gln	Leu	Tyr	Trp 1905	Glu	Leu	Ser
	Leu 1910	Thr	His	Gly	Val	Thr 1915	Gln	Leu	Gly	Phe	Tyr 1920	Val	Leu	Asp
	Asp 1925	Ser	Leu	Phe	Ile	Asn 1930	Gly	Tyr	Ala	Pro	Gln 1935	Asn	Leu	Ser
Ile	Arg 1940		Glu	Tyr	Gln	Ile 1945	Asn	Phe	His	Ile	Val 1950	Asn	Trp	Asn
Leu	Ser 1955	Asn	Pro	Asp	Pro	Thr 1960	Ser	Ser	Glu	Tyr	Ile 1965	Thr	Leu	Leu
Arg	Asp 1970		Gln	Asp	Lys	Val 1975	Thr	Thr	Leu	Tyr	Lys 1980	Gly	Ser	Gln
Leu	His 1985		Thr	Phe	Arg	Phe 1990	Cys	Leu	Val	Thr	Asn 1995	Leu	Thr	Met
						Val 2005					Ser 2010	Ser	Asn	Leu
Asp	Pro 2015		Leu	Val	Glu	Gln 2020	Val	Phe	Leu	Asp	Lys 2025	Thr	Leu	Asn
Ala	Ser 2030		His	Trp	Leu	Gly 2035		Thr	Tyr	Gln	Leu 2040	Val	Asp	Ile
His	Val 2045		Glu	Met	Glu	Ser 2050		Val	Tyr	Gln	Pro 2055		Ser	Ser
Ser	Ser 2060		Gln	His	Phe	Tyr 2065		Asn	Phe	Thr	Ile 2070		Asn	Leu
	Tur	Ser	Gln	Asp	Lys			Pro	Gly	Thr	Thr 2085	Asn	Tyr	Gln
Pro	2075					2080					2003			

Asn Ser Ser Ile Lys Ser Tyr Phe Ser Asp Cys Gln Val Ser Thr 2105

Phe Arg 2120

Ser Val Pro Asn Arg 2125

His His Thr Gly Val Asp Ser Leu 2130

Cys Asn Phe Ser Pro Leu Ala 2140

Tyr Glu 2150

Glu Phe Leu Arg Met 2155

Thr Arg Asn Gly Thr Gln Leu Gln

Asn Phe Thr Leu Asp Arg Ser Ser Val Leu Val Asp Gly Tyr Ser 2165 2170 2170

Pro Asn Arg Asn Glu Pro Leu Thr Gly Asn Ser Asp Leu Pro Phe 2180 2185 2190

Trp Ala Val Ile Leu Ile Gly Leu Ala Gly Leu Leu Gly Leu Ile 2195 2200 2205

Thr Cys Leu Ile Cys Gly Val Leu Val Thr Thr Arg Arg Lys 2210 2215 2220

Lys Glu Gly Glu Tyr Asn Val Gln Gln Gln Cys Pro Gly Tyr Tyr 2225 2230 2235

Gln Ser His Leu Asp Leu Glu Asp Leu Gln 2240 2245

<210> 51

<211> 24

<212> DNA

<213> Artificial

<220>

<223> Synthetic Primer

<400> 51

cagcagagac cagcacgagt actc

<210> 52

<211> 20

<212> DNA

<213> Artificial

24

<220>		
<223>	Synthetic Primer	
<400> tccact	52 geca tggetgaget	20
<210>	53	
<211>	22	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Synthetic Primer	
<400> ccagca	53 cage tetteccagg ac	22
<210>	54	
<211>	22	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Synthetic Primer	
<400> ggaatg	54 gctg agctgacgtc tg	22
<210>	55	
<211>	21	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Synthetic Primer	
<400>	55	

cttccc	agga caacctcaag g	21
<210>	56	
<211>	21	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Synthetic Primer	
<400>	56 tgag tgagccacgt g	21
5 44554		~
<210>	57	
<211>	22	
	DNA	
<213>	Artificial	
<220>		
<223>	Synthetic Primer	
<400> gtcaga	57 totg gtgacotoac tg	22
<210>	58	
<211>	21	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Synthetic Primer	
<400>	58	
gaggca	ctgg aaagcccaga g	21
<210>	59	

<211>	25	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Synthetic Primer	
<400>	59	25
ctgatg	gcat tatggaacac atcac	2,5
<210>	60	
<211>	22	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Synthetic Primer	
<400>	60	22
cccaga	acga gagaccagtg ag	22
<210>	61	
<211>	24	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Synthetic Primer	
<400>	61	2.4
gctgat	ggcg atgaatgaac actg	24
<210>	62	
<211>	22	
<212>	DNA	

<213> Artificial

<213>	Artificial	
<220>		
<223>	Synthetic Primer	
<400> cccaga	62 acga gagaccagtg ag	22
<210>	63	
<211>	35	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Synthetic Primer	
<400> cgcgga	63 tccg aacactgcgt ttgctggctt tgatg	35
<210>	64	
<210> <211>	6423	
<211>		
<211> <212>	23	
<211> <212>	23 DNA	
<211> <212>	23 DNA	
<211> <212> <213> <220>	23 DNA	
<211> <212> <213> <223> <400>	DNA Artificial Synthetic Primer	23
<211> <212> <213> <223> <400>	DNA Artificial Synthetic Primer 64	23
<211> <212> <213> <220> <223> <400> cctctg	DNA Artificial Synthetic Primer 64 tgtg ctgcttcatt ggg	23
<211> <212> <213> <220> <223> <400> cctctg	DNA Artificial Synthetic Primer 64 tgtg ctgcttcatt ggg	23

<220>	
<223> Synthetic Primer	
<400> 65 accggatcca tgggccacac agagcctggc cc	32
<210> 66	
<211> 29	
<212> DNA	
<213> Artificial	
<220>	
<223> Synthetic Primer	
<400> 66 tgtaagctta ggcagggagg atggagtcc	29
<210> 67	
<211> 507	
<212> DNA	
<213> Homo sapien	
<400> 67 atgagaggat cgcatcacca tcaccatcac ggatccatgg gccacacaga gcctggccct	60
ctcctgatac cattcacttt caactttacc atcaccaacc tgcattatga ggaaaacatg	120
caacaccetg gttccaggaa gttcaacacc acggagaggg ttctgcaggg tctgctcaag	180
cccttgttca agaacaccag tgttggccct ctgtactctg gctgcagact gaccttgctc	
agacctgaga agcatgaggc agccactgga gtggacacca tctgtaccca ccgcgttgat	240
cccatcggac ctggactgga cagagagcgg ctatactggg agctgagcca gctgaccaac	300
	360
agcatcacag agctgggacc ctacaccctg gacagggaca gtctctatgt caatggcttc	420
accetegga getetgtgee aaccaceage acteetggga cetecacagt geacetggea	480
acetetggga etecateete eetgeet	507

<211> 169

<212> PRT

<213> Homo sapiens

<400> 68

Met Arg Gly Ser His His His His His Gly Ser Met Gly His Thr 1 $$ 5 $$ 10 $$ 15

Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr 20 25 30

Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe 35 40 45

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys 50 55 60

Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu 65 70 75 80

Arg Pro Glu Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr 85 90 95

His Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr 100 105 110

Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr 115 120 125

Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Arg Ser 130 135 140

Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala 145 150 155 160

Thr Ser Gly Thr Pro Ser Ser Leu Pro 165

<210> 69

<211> 909

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (1)..(909)

<223> Any "X" = any amino acid

<400> 69

Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser 1 10 15

Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys 20 25 30

Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro $35 \hspace{1cm} 40 \hspace{1cm} 45$

Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp 65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro $85 \\ 90 \\ 95$

Thr Thr Ser Ile Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly 100 105 110

Thr Pro Val Ser Lys Pro Gly Pro Ser Ala Ala Ser Pro Leu Leu Ile 115 120 125

Pro Phe Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn 130 135 140

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu 145 150 155 160

Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala $180\,$ $185\,_{\odot}\,$ 190

Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser 195 200 205

Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr 210 215 220

Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu 225 230 235 240

Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr 245 250 255

Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser 260 265 270

Leu Ser Ser Pro Thr Ile Met Ala Ala Gly Pro Leu Leu Ile Pro Phe 275 280 285

Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn Met His His Pro Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly 310 315 Leu Leu Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser 330 Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr 345 Arg Val Asp Ala Val Cys Thr His Arg Pro Asp Pro Lys Ser Pro Gly 360 Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val 395 Asn Gly Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr Pro Gly 405 410 Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser Ser Pro 425 Ser Pro Thr Thr Ala Gly Pro Leu Leu Met Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu Lys Pro 470 475 Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu 515 520 Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Val Thr Glu Leu 535 540 Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala Val 570 His Leu Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly His Thr Ala 580 585

Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn

605 595 600 Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe Asn 615 Thr Met Glu Arg Val Leu Gln Gly Cys Leu Val Pro Cys Ser Arg Asn 635 Thr Asn Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Xaa Glu Lys Xaa Xaa Ala Ala Thr Xaa Val Asp Xaa Xaa Cys Xaa Xaa 665 Xaa Xaa Asp Pro Xaa Xaa Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Thr 695 Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser 705 Val Ala Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Val Pro Leu Leu 740 745 Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Gly Glu 760 Asp Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val 775 770 Leu Gln Gly Leu Leu Gly Pro Leu Phe Lys Asn Ser Ser Val Gly Pro 795 790 Leu Tyr Ser Gly Cys Arg Leu Ile Ser Leu Arg Ser Glu Lys Asp Gly 815 805 810 Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His His Leu Asn Pro Gln Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Gln Leu Ser Gln Val Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu Thr Thr Ser 875 870 Thr Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser 885 Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Ile

<210> 70

<211> 525

<212> PRT

<213> Homo sapiens

<400> 70

Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu 1 5 10 15

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala 20 25 30

Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn 35 40 45

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr 50 55 60

Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu 65 70 75 80

Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr 85 90 95

Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu Thr Pro Ser Ser 100 105 110

Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Val Pro Phe Thr Leu 115 120 125

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Ala Met Arg His Pro 130 135 140

Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu 145 150 155 160

Arg Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly Cys 165 170 175

Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Arg Val

Asp Ala Ala Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp 195 200 205

Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr 210 215 220

Glu Leu Gly Pro Tyr Thr Leu Asp Arg Val Ser Leu Tyr Val Asn Gly 225 230 235 240

Phe Asn Pro Arg Ser Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser 245 250 255

Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly His 260 265 270

Thr Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile 275 280 285

Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys 290 295 300

Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe 305 310 315 320

Lys Asn Thr Ser Ile Gly Pro Leu Tyr Ser Ser Cys Arg Leu Thr Leu 325 330 335

Leu Arg Pro Glu Lys Asp Lys Ala Ala Thr Arg Val Asp Ala Ile Cys 340 345 350

Thr His His Pro Asp Pro Gln Ser Pro Gly Leu Asn Arg Glu Gln Leu 355 360 365

Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro 370 375 380

Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asp Gly Phe Thr His Trp 385 390 395 400

Ser Pro Ile Pro Thr Thr Ser Thr Pro Gly Thr Ser Ile Val Asn Leu 405 410 415

Gly Thr Ser Gly Ile Pro Pro Ser Leu Pro Glu Thr Thr Ala Thr Gly
420 425 430

Pro Leu Ile Pro Phe Thr Pro Asn Phe Thr Ile Thr Asn Leu Gln 435 440 445

Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met 450 455 460

Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser 465 470 475 480

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu 485 490 495

Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro 500 505 510

Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr 515 520 525

<210> 71

<211> 594

<212> PRT

<213> Homo sapiens

<400> 71

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser 1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Asp Gly Val Ala Thr Arg Val Asp Ala Ile Cys Thr His Arg Pro $35 \hspace{1cm} 40 \hspace{1cm} 45$

Asp Pro Lys Ile Pro Gly Leu Asp Arg Gln Gln Leu Tyr Trp Glu Leu 50 60

Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp 65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro\$85\$ 90 95

Thr Thr Ser Thr Pro Gly Thr Phe Thr Val Gln Pro Glu Thr Ser Glu 100 105 110

Thr Pro Ser Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu 115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Ile Asn Leu Gln Tyr Glu Glu Asp 130 135 140

Met His Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu 145 150 155 160

Gln Gly Leu Leu Met Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Gln Glu Ala 180 185 190

Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Ser Glu
195 200 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr 210 215 220

Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu 225 230 235 240

Tyr Val Asn Gly Phe Thr His Ser Gly Val Leu Cys Pro Pro Ser 245 250 255

Ile Leu Gly Ile Phe Thr Val Gln Pro Glu Thr Phe Glu Thr Pro Ser 260 265 270

Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu Pro Phe Thr 275 280 285

Leu	Asn 290	Phe	Thr	Ile	Ile	Asn 295	Leu	Gln	Tyr	Glu	Glu 300	Asp	Met	His	Arg
Pro 305	Gly	Ser	Arg	Lys	Phe 310	Asn	Thr	Thr	Glu	Arg 315	Val	Leu	Gln	Gly	Leu 320
Leu	Thr	Pro	Leu	Phe 325	Lys	Asn	Thr	Ser	Val 330	Gly	Pro	Leu	Tyr	Ser 335	Gly
Cys	Arg	Leu	Thr 340	Leu	Leu	Arg	Pro	Glu 345	Lys	Gln	Glu	Ala	Ala 350	Thr	Gly
Val	Asp	Thr 355	Ile	Cys	Thr	His	Arg 360	Val	Asp	Pro	Ile	Gly 365	Pro	Gly	Leu
Asp	Arg 370	Glu	Arg	Leu	Tyr	Trp 375	Glu	Leu	Ser	Gln	Leu 380	Thr	Asn	Ser	Ile
Thr 385	Glu	Leu	Gly	Pro	Tyr 390	Thr	Leu	Asp	Arg	Asp 395	Ser	Leu	Tyr	Val	Asn 400
Gly	Phe	Asn	Pro	Trp 405	Ser	Ser	Val	Pro	Thr 410	Thr	Ser	Thr	Pro	Gly 415	Thr
Ser	Thr	Val	His 420	Leu	Ala	Thr	Ser	Gly 425	Thr	Pro	Ser	Ser	Leu 430	Pro	Gly
His	Thr	Ala 435	Pro	Val	Pro	Leu	Leu 440	Ile	Pro	Phe	Thr	Leu 445	Asn	Phe	Thr
Ile	Thr 450	Asn	Leu	His	Tyr	Glu 455	Glu	Asn	Met	Gln	His 460	Pro	Gly	Ser	Arg
Lys 465	Phe	Asn	Thr	Thr	Glu 470	Arg	Val	Leu	Gln	Gly 475	Leu	Leu	Lys	Pro	Leu 480
Phe	Lys	Ser	Thr	Ser 485	Val	Gly	Pro	Leu	Tyr 490	Ser	Gly	Cys	Arg	Leu 495	Thr
Leu	Leu	Arg	Pro 500	Glu	Lys	His	Gly	Ala 505	Ala	Thr	Gly	Val	Asp 510	Ala	Ile
Cys	Thr	His 515	Arg	Leu	Asp	Pro	Lys 520	Ser	Pro	Gly	Val	Asp 525	Arg	Glu	Gln
Leu	Tyr 530	Trp	Glu	Leu	Ser	Gln 535	Leu	Thr	Asn	Gly	Ile 540	Lys	Glu	Leu	Gly
Pro 545	Tyr	Thr	Leu	Asp	Arg 550	Asn	Ser	Leu	Tyr	Val 555	Asn	Gly	Phe	Thr	His 560
Trp	Ile	Pro	Val	Pro 565	Thr	Ser	Ser	Thr	Pro 570	Gly	Thr	Ser	Thr	Val 575	Asp
Leu	Gly	Ser	Gly 580	Thr	Pro	Ser	Ser	Leu 585	Pro	Ser	Pro	Thr	Thr 590	Ala	Gly

Pro Leu

<210> 72

<211> 424

<212> PRT

<213> Homo sapiens

<400> 72

Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg
1 5 10 15

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Tyr Thr His
20 25 30

Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp 35 40 45

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr 50 55 60

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr Ser 65 70 75 80

Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr 85 90 95

Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Ser Ala Gly Pro Leu 100 105 110

Leu Ile Pro Phe Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu 115 120 125

Glu Asn Met His His Pro Gly Ser Arg Lys Phe Asn Thr Met Glu Arg 130 135 140

Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly 145 150 155 160

Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp 165 170 175

Gly Val Ala Thr Arg Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro 180 185 190

Lys Ile Pro Gly Leu Asp Arg Gln Gln Leu Tyr Trp Glu Leu Ser Gln 195 200 205

Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp 210 215 220

Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro Thr Thr 225 230 235 240

Ser Thr Pro Gly Thr Phe Thr Val Gln Pro Glu Thr Ser Glu Thr Pro 245 250 255

Ser Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu Pro Phe 260 265 270

Thr Leu Asn Phe Thr Ile Ile Asn Leu Gln Tyr Glu Glu Asp Met His 275 280 285

Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly 290 295 300

Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser 305 310 315 320

Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr 325 330 335

Gly Val Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly 340 345 350

Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser 355 360 365

Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val 370 380

Asn Gly Phe Asn Pro Trp Ser Ser Val Pro Thr Thr Ser Thr Pro Gly 385 390 395

Gly His Thr Ala Pro Val Pro Leu 420

<210> 73

<211> 286

<212> PRT

<213> Homo sapiens

<400> 73

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser 1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu 20 25 30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu 35 40 45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro 85 90 95

Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly 100 105 110

Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Val

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp 130 135 140

Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu 145 150 155 160

Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala 180 185 190

Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn 195 200 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr 210 220

Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu 225 235 240

Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr 245 250 255

Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu Thr Pro Ser Ser 260 265 270

Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile Pro Phe 275 280 285

<210> 74

<211> 286

<212> PRT

<213> Homo sapiens

<400> 74

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser 1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys

<213> Homo sapiens

20 25 30 Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly 105 Thr Pro Val Ser Lys Pro Gly Pro Ser Ala Ala Ser Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp 130 135 Met His Arg Pro Gly Ser Arg Lys Phe Asn Ala Thr Glu Arg Val Leu 150 155 Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu 165 Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr 215 His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu 225 230 Tyr Val Asn Gly Phe Thr His Gln Ser Ser Met Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Ile Pro Phe 280 <210> 75 <211> 286 <212> PRT

275

<400> 75 Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu Tyr Val Asn Gly Phe Ser Arg Gln Ser Ser Met Thr Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn 135 130 Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu 155 150 Gln Gly Leu Leu Asn Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu 165 Tyr Ser Gly Cys Arg Leu Thr Ser Leu Lys Pro Glu Lys Asp Gly Ala 185 Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Ala Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser 265 Leu Pro Ser Pro Thr Thr Ala Val Pro Leu Leu Ile Pro Phe

<210> 76

<211> 286

<212> PRT

<213> Homo sapiens

<400> 76

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser 1 10 15

Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu 20 25 30

Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro $35 \hspace{1cm} 40 \hspace{1cm} 45$

Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu 50 55 60

Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp 70 75 80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu 85 90 95

Thr Thr Ser Thr Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly 100 105 110

Thr Pro Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Ile 115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn 130 135 140

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu 145 150 155 160

Gln Gly Leu Leu Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala 180 185 190

Ala Thr Arg Val Asp Ala Val Cys Thr Gln Arg Pro Asp Pro Lys Ser 195 200 205

Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr 210 215 220

His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg His Ser Leu 225 230 235 240

Tyr Val Asn Gly Leu Thr His Gln Ser Ser Met Thr Thr Arg Thr 245 250 255

Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser 260 265 270

Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Ile Pro Phe 275 280 285

<210> 77

<211> 288

<212> PRT

<213> Homo sapiens

<400> 77

Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Ser Lys Asn Ser Ser $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu 20 25 30

Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro $35 \hspace{1cm} 40 \hspace{1cm} 45$

Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu 50 55 60

Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp 65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro 85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly 100 105 110

Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile 115 120 125

Pro Phe Thr Val Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn 130 135 140

Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu 145 150 155 160

Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala 180 185 190

Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser 195 200 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr

210 215 220 Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu 230 235 Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr 250 245 Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser Leu Ser Ser Pro Thr Ile Met Ala Ala Gly Pro Leu Leu Ile Pro Phe 280 <210> 78 <211> 597 <212> PRT <213> Homo sapiens <400> 78 Glu Arg Val Leu His Gly Leu Leu Thr Pro Leu Phe Lys Asn Thr Arg Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Trp Ser Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly 105 Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile 115 120 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn 135 Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu 145 Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu 165 170

Tyr Ser Gly Cys Arg Leu Thr Leu Phe Lys Pro Glu Lys His Glu Ala 185 Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly 200 Pro Gly Leu Asp Arg Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr 230 235 Val Asn Gly Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro 250 Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser Leu 265 Pro Gly His Thr Ala Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn 280 275 Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly 295 Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Lys 315 Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala Ala Thr Gly Val Asp 345 Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu Tyr Val Asn Gly Phe 390 Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr Pro Gly Thr Ser Thr 410 405 Val His Leu Gly Thr Ser Glu Thr Pro Ser Ser Leu Pro Arg Pro Ile 420 425 Val Pro Gly Pro Leu Leu Ile Pro Phe Thr Ile Asn Phe Thr Ile Thr 440 Asn Leu Arg Tyr Glu Glu Asn Met His His Pro Gly Ser Arg Lys Phe 455 450 Asn Ile Met Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Leu Phe Lys 475 Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Ile Ser Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr 500 505 510

His His Leu Asn Pro Gln Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr 515 520 525

Trp Gln Leu Ser Gln Met Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr 530 535 540

Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser 545 550 555 560

Ser Gly Leu Thr Thr Ser Thr Pro Trp Thr Ser Thr Val Asp Leu Gly 565 570 575

Thr Ser Gly Thr Pro Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro 580 585 590

Leu Leu Ile Pro Phe 595

<210> 79

<211> 420

<212> PRT

<213> Homo sapiens

<400> 79

Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys
1 10 15

Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn 20 25 30

Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser 35 40 45

Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg 50 55 60

Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr 65 70 75 80

Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr 85 90 95

Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro 100 105 110

Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met 115 120 125

Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Ser Val Leu Gln

	130					135					140				
Gly 145	Leu	Leu	Thr	Pro	Leu 150	Phe	Lys	Asn	Ser	Ser 155	Val	Gly	Pro	Leu	Tyr 160
Ser	Gly	Cys	Arg	Leu 165	Ile	Ser	Leu	Arg	Ser 170	Glu	Lys	Asp	Gly	Ala 175	Ala
Thr	Gly	Val	Asp 180	Ala	Ile	Cys	Thr	His 185	His	Leu	Asn	Pro	Gln 190	Ser	Pro
Gly	Leu	Asp 195	Arg	Glu	Gln	Leu	Tyr 200	Trp	Gln	Leu	Ser	Gln 205	Met	Thr	Asn
Gly	Ile 210	Lys	Glu	Leu	Gly	Pro 215	Tyr	Thr	Leu	Asp	Arg 220	Asp	Ser	Leu	Tyr
Val 225	Asn	Gly	Phe	Thr	His 230	Arg	Ser	Leu	Gly	Leu 235	Thr	Thr	Ser	Thr	Pro 240
Trp	Thr	Ser	Thr	Val 245	Asp	Leu	Gly	Thr	Ser 250	Gly	Thr	Pro	Ser	Pro 255	Val
Pro	Ser	Pro	Thr 260	Thr	Ala	Gly	Pro	Leu 265	Leu	Ile	Pro	Phe	Thr 270	Leu	Asn
Phe	Thr	Ile 275	Thr	Asn	Leu	Gln	Tyr 280	Glu	Glu	Asn	Met	Gly 285	His	Pro	Gly
Ser	Arg 290	Lys	Phe	Asn	Ile	Met 295	Glu	Arg	Val	Leu	Gln 300	Gly	Leu	Leu	Arg
Pro 305	Val	Phe	Lys	Asn	Thr 310	Ser	Val	Gly	Pro	Leu 315	Tyr	Ser	Gly	Cys	Arg 320
Leu	Thr	Leu	Leu	Arg 325	Pro	Lys	Lys	Asp	Gly 330	Ala	Ala	Thr	Lys	Val 335	Asp
Ala	Ile	Cys	Thr 340	Tyr	Arg	Pro	Asp	Pro 345	Lys	Ser	Pro	Gly	Leu 350	Asp	Arg
Glu	Gln	Leu 355	Tyr	Trp	Glu	Leu	Ser 360	Gln	Leu	Thr	His	Ser 365	Ile	Thr	Glu
Leu	Gly 370	Pro	Tyr	Thr	Leu	Asp 375	Arg	Asp	Ser	Leu	Tyr 380	Val	Asn	Gly	Phe
Thr 385	Gln	Arg	Ser	Ser	Val 390	Pro	Thr	Thr	Ser	Ile 395	Pro	Gly	Thr	Pro	Thr 400
Val	Asp	Leu	Gly	Thr 405	Ser	Gly	Thr	Pro	Val 410	Ser	Lys	Pro	Gly	Pro 415	Ser
Ala	Ala	Ser	Pro 420												
<210)> 8	30													

<211> 479

<212> PRT

<213> Homo sapiens

<400> 80

Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu 1 5 10 15

Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr 20 25 30

His Gln Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Ser Thr Val
35 40 45

Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser Leu Ser Ser Pro Thr Ile 50 55 60

Met Ala Ala Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile 65 70 75 80

Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro Gly Ser Arg Lys
85 90 95

Phe Asn Ile Met Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe 100 105 110

Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu 115 120 125

Leu Arg Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys
130 135 140

Ser His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu 145 150 155 160

Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro 165 170 175

Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg 180 185 190

Ser Ser Val Ala Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu 195 200 205

Gly Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Ala Val 210 215 220

Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys 225 230 235 240

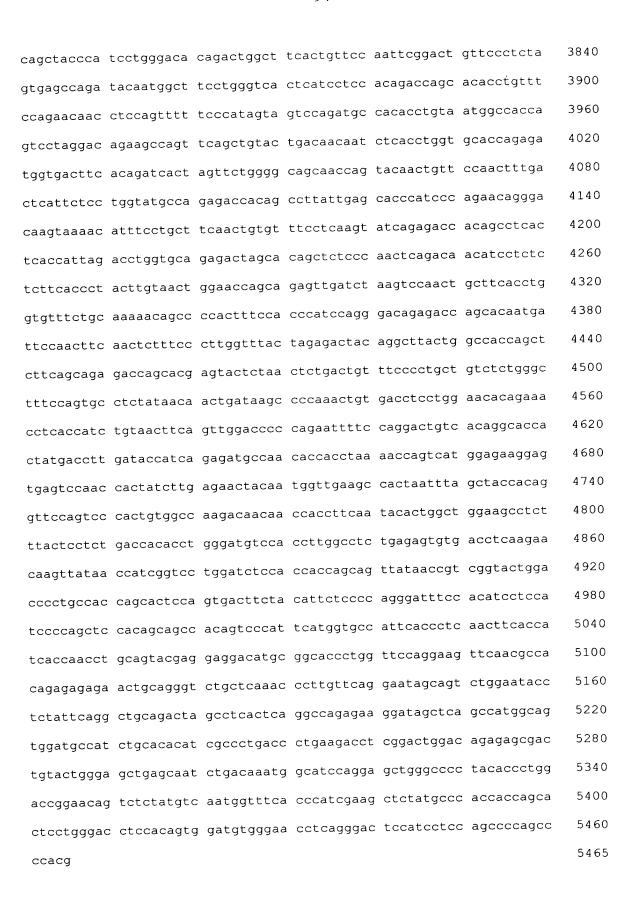
Tyr Glu Glu Asp Met His Cys Pro Gly Ser Arg Lys Phe Asn Thr Thr 245 250 255

Glu Arg Val Leu Gln Ser Leu Phe Gly Pro Met Phe Lys Asn Thr Ser

			260					265					270				
Val	Gly	Pro 275	Leu	Tyr	Ser	Gly	Cys 280	Arg	Leu	Thr	Leu	Leu 285	Arg	Ser	Glu		
Lys	Asp 290	Gly	Ala	Ala	Thr	Gly 295	Val	Asp	Ala	Ile	Cys 300	Thr	His	Arg	Leu		
Asp 305	Pro	Lys	Ser	Leu	Gly 310	Val	Asp	Arg	Glu	Gln 315	Leu	Tyr	Trp	Glu	Leu 320		
Ser	Gln	Leu	Thr	Asn 325	Gly	Ile	Lys	Glu	Leu 330	Gly	Pro	Tyr	Thr	Leu 335	Asp		
Arg	Asn	Ser	Leu 340	Tyr	Val	Asn	Gly	Phe 345	Thr	His	Gln	Thr	Ser 350	Ala	Pro		
Asn	Thr	Ser 355	Thr	Pro	Gly	Thr	Ser 360	Thr	Val	Asp	Leu	Gly 365	Thr	Ser	Gly		
Thr	Pro 370	Ser	Ser	Leu	Pro	Ser 375	Pro	Thr	Ser	Ala	Gly 380	Pro	Leu	Leu	Val		
Pro 385	Phe	Thr	Leu	Asn	Phe 390	Thr	Ile	Thr	Asn	Leu 395	Gln	Tyr	Glu	Glu	Asp 400		
Met	Arg	Arg	Thr	Gly 405	Ser	Arg	Lys	Phe	Asn 410	Thr	Met	Glu	Ser	Val 415	Leu		
Gln	Gly	Leu	Leu 420	Lys	Pro	Leu	Phe	Lys 425	Asn	Thr	Ser	Val	Gly 430	Pro	Leu		
Tyr	Ser	Gly 435	Cys	Arg	Leu	Thr	Leu 440	Leu	Arg	Pro	Glu	Lys 445	Asp	Gly	Ala		
Ala	Thr 450	Gly	Val	Asp	Ala	Ile 455	Cys	Thr	His	Arg	Leu 460	Asp	Pro	Lys	Ser		
Pro 465	Gly	Leu	Asn	Arg	Glu 470	Gln	Leu	Tyr	Trp	Glu 475	Leu	Ser	Lys	Leu			
<210)> 8	31															
<211	.> 5	465															
<212	!> [ANG															
<213	i> H	Iomo	sapi	.ens													
	> 8	_	aaaa	rtaac	ra 20	·aa+o	12027	at a	ict+>	tca	aa++	cc++	C 3 C	+ a+ a	aacac		60
											_					1	120
													_	_	agcac		
acaq	ayyt	.ac c	alaa	ıyacc	a qt	caaa	aacc	: CTC	agac	atc	cact	ccac	CT a	ccad	tccta		180

aaggactaca cacaggaggg acaaaaagaa tggagaccac caccacagct ttgaagacca 240

300 ccaccacage tttgaagace acttccagag ccacettgae caccagtgte tatactccca ctttgggaac actgactccc ctcaatgcat caaggcaaat ggccagcaca atcctcacag 360 aaatgatgat cacaacccca tatgttttcc ctgatgttcc agaaacgaca tcctcattgg 420 ctaccageet gggageagaa accageacag etetteecag gacaaceeca tetgttetea 480 atagagaatc agagaccaca gcctcactgg tctctcgttc tggggcagag agaagtccgg 540 600 ttattcaaac tctagatgtt tcttctagtg agccagatac aacagcttca tgggttatcc 660 atcctgcaga gaccatccca actgtttcca agacaacccc caattttttc cacagtgaat tagacactgt atcttccaca gccaccagtc atggggcaga cgtcagctca gccattccaa 720 780 caaatatete acetagtgaa etagatgeae tgaceecaet ggteaetatt teggggaeag atactagtac aacattccca acactgacta agtccccaca tgaaacagag acaagaacca 840 900 catggctcac tcatcctgca gagaccagct caactattcc cagaacaatc cccaattttt ctcatcatga atcagatgcc acacettcaa tagecaceag teetggggca gaaaceagtt 960 1020 cagctattcc aattatgact gtctcacctg gtgcagaaga tctggtgacc tcacaggtca 1080 ctagttctgg gacagacaga aatatgacta ttccaacttt gactctttct cctggtgaac 1140 caaagacgat agcctcatta gtcacccatc ctgaagcaca gacaagttcg gccattccaa 1200 cttcaactat ctcgcctgct gtatcacggt tggtgacctc aatggtcacc agtttggcgg 1260 caaagacaag tacaactaat cgagctctga caaactcccc tggtgaacca gctacaacag 1320 tttcattggt cacgcatcct gcacagacca gcccaacagt tccctggaca acttccattt 1380 ttttccatag taaatcagac accacactt caatgaccac cagtcatggg gcagaatcca gttcagctgt tccaactcca actgtttcaa ctgaggtacc aggagtagtg acccctttgg 1440 1500 tcaccagttc tagggcagtg atcagtacaa ctattccaat tctgactctt tctcctggtg aaccagagac cacaccttca atggccacca gtcatgggga agaagccagt tctgctattc 1560 caactccaac tgtttcacct ggggtaccag gagtggtgac ctctctggtc actagttcta 1620 1680 gggcagtgac tagtacaact attccaattc tgactttttc tcttggtgaa ccagagacca caccttcaat ggccaccagt catgggacag aagctggctc agctgttcca actgttttac 1740 ctgaggtacc aggaatggtg acctctctgg ttgctagttc tagggcagta accagtacaa 1800 ctcttccaac tctgactctt tctcctggtg aaccagagac cacaccttca atggccacca 1860 gtcatggggc agaagccagc tcaactgttc caactgtttc acctgaggta ccaggagtgg 1920 tgacctctct ggtcactagt tctagtggag taaacagtac aagtattcca actctgattc 1980 tttctcctgg tgaactagaa accacacctt caatggccac cagtcatggg gcagaagcca 2040 2100 gctcagctgt tccaactcca actgtttcac ctggggtatc aggagtggtg accectctgg 2160 tcactagttc cagggcagtg accagtacaa ctattccaat tctaactctt tcttctagtg agccagagac cacacettca atggccacca gtcatggggt agaagccage tcagetgtte 2220 taactgtttc acctgaggta ccaggaatgg tgacctctct ggtcactagt tctagagcag 2280 taaccagtac aactatteca actetgacta tttettetga tgaaccagag accaeaett 2340 cattggtcac ccattctgag gcaaagatga tttcagccat tccaacttta gctgtctccc 2400 ctactgtaca agggctggtg acttcactgg tcactagttc tgggtcagag accagtgcgt 2460 2520 tttcaaatct aactgttgcc tcaagtcaac cagagaccat agactcatgg gtcgctcatc 2580 ctgggacaga agcaagttct gttgttccaa ctttgactgt ctccactggt gagccgttta caaatatete attggteace cateetgeag agagtagete aactetteee aggaeaacet 2640 2700 caaggttttc ccacagtgaa ttagacacta tgccttctac agtcaccagt cctgaggcag aatccagctc agccatttca actactattt cacctggtat accaggtgtg ctgacatcac 2760 2820 tggtcactag ctctgggaga gacatcagtg caacttttcc aacagtgcct gagtccccac 2880 atgaatcaga ggcaacagcc tcatgggtta ctcatcctgc agtcaccagc acaacagttc 2940 ccaggacaac ccctaattat tctcatagtg aaccagacac cacaccatca atagccacca 3000 gtcctggggc agaagccact tcagattttc caacaataac tgtctcacct gatgtaccag 3060 atatggtaac ctcacaggtc actagttctg ggacagacac cagtataact attccaactc tgactctttc ttctggtgag ccagagacca caacctcatt tatcacctat tctgagacac 3120 acacaagttc agccattcca actotecetg teteceetgg tgcatcaaag atgetgacet 3180 cactggtcat cagttctggg acagacagca ctacaacttt cccaacactg acggagaccc 3240 3300 catatgaacc agagacaaca gccatacagc tcattcatcc tgcagagacc aacacaatgg 3360 ttcccaagac aactcccaag ttttcccata gtaagtcaga caccacactc ccagtagcca teaceagtee tgggeeagaa geeagtteag etgttteaac gaeaactate teacetgata 3420 tgtcagatct ggtgacctca ctggtcccta gttctgggac agacaccagt acaaccttcc 3480 3540 caacattgag tgagacccca tatgaaccag agactacagt cacgtggctc actcatcctg 3600 cagaaaccag cacaacggtt tctgggacaa ttcccaactt ttcccatagg ggatcagaca ctgcaccctc aatggtcacc agtcctggag tagacacgag gtcaggtgtt ccaactacaa 3660 3720 ccatcccacc cagtatacca ggggtagtga cctcacaggt cactagttct gcaacagaca ctagtacage tattecaact ttgacteett eteetggtga accagagace acageeteat 3780



<210> 82

<211> 1821

<212> PRT

<213> Homo sapiens

<400> 82

Glu Ser Val Leu Glu Gly Thr Val Thr Ser Ala Tyr Gln Val Pro Ser
1 5 10 15

Leu Ser Thr Arg Leu Thr Arg Thr Asp Gly Ile Met Glu His Ile Thr
20 25 30

Lys Ile Pro Asn Glu Ala Ala His Arg Gly Thr Ile Arg Pro Val Lys 35 40 45

Gly Pro Gln Thr Ser Thr Ser Pro Ala Ser Pro Lys Gly Leu His Thr 50 55 60

Gly Gly Thr Lys Arg Met Glu Thr Thr Thr Thr Ala Leu Lys Thr Thr 65 70 75 80

Thr Thr Ala Leu Lys Thr Thr Ser Arg Ala Thr Leu Thr Thr Ser Val 85 90 95

Tyr Thr Pro Thr Leu Gly Thr Leu Thr Pro Leu Asn Ala Ser Arg Gln
100 105 110

Met Ala Ser Thr Ile Leu Thr Glu Met Met Ile Thr Thr Pro Tyr Val 115 120 125

Phe Pro Asp Val Pro Glu Thr Thr Ser Ser Leu Ala Thr Ser Leu Gly 130 135 140

Ala Glu Thr Ser Thr Ala Leu Pro Arg Thr Thr Pro Ser Val Leu Asn 145 150 155 160

Arg Glu Ser Glu Thr Thr Ala Ser Leu Val Ser Arg Ser Gly Ala Glu 165 170 175

Arg Ser Pro Val Ile Gln Thr Leu Asp Val Ser Ser Ser Glu Pro Asp 180 185 190

Thr Thr Ala Ser Trp Val Ile His Pro Ala Glu Thr Ile Pro Thr Val 195 200 205

Ser Lys Thr Thr Pro Asn Phe Phe His Ser Glu Leu Asp Thr Val Ser 210 215 220

Ser Thr Ala Thr Ser His Gly Ala Asp Val Ser Ser Ala Ile Pro Thr 225 230 235 240

Asn Ile Ser Pro Ser Glu Leu Asp Ala Leu Thr Pro Leu Val Thr Ile

				245					250					255	
Ser	Gly	Thr	Asp 260	Thr	Ser	Thr	Thr	Phe 265	Pro	Thr	Leu	Thr	Lys 270	Ser	Pro
His	Glu	Thr 275	Glu	Thr	Arg	Thr	Thr 280	Trp	Leu	Thr	His	Pro 285	Ala	Glu	Thr
Ser	Ser 290	Thr	Ile	Pro	Arg	Thr 295	Ile	Pro	Asn	Phe	Ser 300	His	His	Glu	Ser
Asp 305	Ala	Thr	Pro	Ser	Ile 310	Ala	Thr	Ser	Pro	Gly 315	Ala	Glu	Thr	Ser	Ser 320
Ala	Ile	Pro	Ile	Met 325	Thr	Val	Ser	Pro	Gly 330	Ala	Glu	Asp	Leu	Val 335	Thr
Ser	Gln	Val	Thr 340	Ser	Ser	Gly	Thr	Asp 345	Arg	Asn	Met	Thr	Ile 350	Pro	Thr
Leu	Thr	Leu 355	Ser	Pro	Gly	Glu	Pro 360	Lys	Thr	Ile	Ala	Ser 365	Leu	Val	Thr
His	Pro 370	Glu	Ala	Gln	Thr	Ser 375	Ser	Ala	Ile	Pro	Thr 380	Ser	Thr	Ile	Ser
Pro 385	Ala	Val	Ser	Arg	Leu 390	Val	Thr	Ser	Met	Val 395	Thr	Ser	Leu	Ala	Ala 400
Lys	Thr	Ser	Thr	Thr 405	Asn	Arg	Ala	Leu	Thr 410	Asn	Ser	Pro	Gly	Glu 415	Pro
Ala	Thr	Thr	Val 420	Ser	Leu	Val	Thr	His 425	Pro	Ala	Gln	Thr	Ser 430	Pro	Thr
Val	Pro	Trp 435	Thr	Thr	Ser	Ile	Phe 440	Phe	His	Ser	Lys	Ser 445	Asp	Thr	Thr
Pro	Ser 450	Met	Thr	Thr	Ser	His 455	Gly	Ala	Glu	Ser	Ser 460	Ser	Ala	Val	Pro
Thr 465	Pro	Thr	Val	Ser	Thr 470	Glu	Val	Pro	Gly	Val 475	Val	Thr	Pro	Leu	Val 480
Thr	Ser	Ser	Arg	Ala 485	Val	Ile	Ser	Thr	Thr 490	Ile	Pro	Ile	Leu	Thr 495	Leu
Ser	Pro	Gly	Glu 500	Pro	Glu	Thr	Thr	Pro 505	Ser	Met	Ala	Thr	Ser 510	His	Gly
Glu	Glu	Ala 515	Ser	Ser	Ala	Ile	Pro 520	Thr	Pro	Thr	Val	Ser 525	Pro	Gly	Val
Pro	Gly 530	Val	Val	Thr	Ser	Leu 535	Val	Thr	Ser	Ser	Arg 540	Ala	Val	Thr	Ser
Thr 545	Thr	Ile	Pro	Ile	Leu 550	Thr	Phe	Ser	Leu	Gly 555	Glu	Pro	Glu	Thr	Thr 560

Pro Ser Met Ala Thr Ser His Gly Thr Glu Ala Gly Ser Ala Val Pro 570 565 Thr Val Leu Pro Glu Val Pro Gly Met Val Thr Ser Leu Val Ala Ser 585 Ser Arg Ala Val Thr Ser Thr Thr Leu Pro Thr Leu Thr Leu Ser Pro 600 Gly Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Ala Glu 615 Ala Ser Ser Thr Val Pro Thr Val Ser Pro Glu Val Pro Gly Val Val 630 635 625 Thr Ser Leu Val Thr Ser Ser Ser Gly Val Asn Ser Thr Ser Ile Pro 645 Thr Leu Ile Leu Ser Pro Gly Glu Leu Glu Thr Thr Pro Ser Met Ala 665 660 Thr Ser His Gly Ala Glu Ala Ser Ser Ala Val Pro Thr Pro Thr Val 680 Ser Pro Gly Val Ser Gly Val Val Thr Pro Leu Val Thr Ser Ser Arg 695 Ala Val Thr Ser Thr Thr Ile Pro Ile Leu Thr Leu Ser Ser Ser Glu 715 Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Val Glu Ala Ser 730 Ser Ala Val Leu Thr Val Ser Pro Glu Val Pro Gly Met Val Thr Ser Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr Thr Ile Pro Thr Leu 765 Thr Ile Ser Ser Asp Glu Pro Glu Thr Thr Thr Ser Leu Val Thr His 775 Ser Glu Ala Lys Met Ile Ser Ala Ile Pro Thr Leu Ala Val Ser Pro 795 790 Thr Val Gln Gly Leu Val Thr Ser Leu Val Thr Ser Ser Gly Ser Glu 810 Thr Ser Ala Phe Ser Asn Leu Thr Val Ala Ser Ser Gln Pro Glu Thr 825 820 Ile Asp Ser Trp Val Ala His Pro Gly Thr Glu Ala Ser Ser Val Val 840 835 Pro Thr Leu Thr Val Ser Thr Gly Glu Pro Phe Thr Asn Ile Ser Leu 855 860 Val Thr His Pro Ala Glu Ser Ser Ser Thr Leu Pro Arg Thr Thr Ser 875 870

Arg Phe Ser His Ser Glu Leu Asp Thr Met Pro Ser Thr Val Thr Ser Pro Glu Ala Glu Ser Ser Ser Ala Ile Ser Thr Thr Ile Ser Pro Gly 905 Ile Pro Gly Val Leu Thr Ser Leu Val Thr Ser Ser Gly Arg Asp Ile 920 Ser Ala Thr Phe Pro Thr Val Pro Glu Ser Pro His Glu Ser Glu Ala 930 Thr Ala Ser Trp Val Thr His Pro Ala Val Thr Ser Thr Thr Val Pro 950 Arg Thr Thr Pro Asn Tyr Ser His Ser Glu Pro Asp Thr Thr Pro Ser 965 Ile Ala Thr Ser Pro Gly Ala Glu Ala Thr Ser Asp Phe Pro Thr Ile 985 980 Thr Val Ser Pro Asp Val Pro Asp Met Val Thr Ser Gln Val Thr Ser 1000 Ser Gly Thr Asp Thr Ser Ile Thr Ile Pro Thr Leu Thr Leu Ser 1015 1020 Ser Gly Glu Pro Glu Thr Thr Thr Ser Phe Ile Thr Tyr Ser Glu 1035 1030 1025 Thr His Thr Ser Ser Ala Ile Pro Thr Leu Pro Val Ser Pro Gly 1045 1050 1040 Ala Ser Lys Met Leu Thr Ser Leu Val Ile Ser Ser Gly Thr Asp 1060 Ser Thr Thr Thr Phe Pro Thr Leu Thr Glu Thr Pro Tyr Glu Pro 1075 1070 Glu Thr Thr Ala Ile Gln Leu Ile His Pro Ala Glu Thr Asn Thr 1090 Met Val Pro Arg Thr Thr Pro Lys Phe Ser His Ser Lys Ser Asp 1105 1100 Thr Thr Leu Pro Val Ala Ile Thr Ser Pro Gly Pro Glu Ala Ser 1120 1125 1115 Ser Ala Val Ser Thr Thr Ile Ser Pro Asp Met Ser Asp Leu 1135 1130 Val Thr Ser Leu Val Pro Ser Ser Gly Thr Asp Thr Ser Thr Thr 1155 1150 Phe Pro Thr Leu Ser Glu Thr Pro Tyr Glu Pro Glu Thr Thr Ala 1170 1160 1165 Thr Trp Leu Thr His Pro Ala Glu Thr Ser Thr Thr Val Ser Gly

	1175					1180					1185			
Thr	Ile 1190	Pro	Asn	Phe	Ser	His 1195	Arg	Gly	Ser	Asp	Thr 1200	Ala	Pro	Ser
Met	Val 1205	Thr	Ser	Pro	Gly	Val 1210	Asp	Thr	Arg	Ser	Gly 1215	Val	Pro	Thr
Thr	Thr 1220	Ile	Pro	Pro	Ser	Ile 1225	Pro	Gly	Val	Val	Thr 1230	Ser	Gln	Val
Thr	Ser 1235	Ser	Ala	Thr	Asp	Thr 1240	Ser	Thr	Ala	Ile	Pro 1245	Thr	Leu	Thr
Pro	Ser 1250		Gly	Glu	Pro	Glu 1255	Thr	Thr	Ala	Ser	Ser 1260	Ala	Thr	His
Pro	Gly 1265	Thr	Gln	Thr	Gly	Phe 1270		Val	Pro	Ile	Arg 1275	Thr	Val	Pro
Ser	Ser 1280	Glu	Pro	Asp	Thr	Met 1285	Ala	Ser	Trp	Val	Thr 1290	His	Pro	Pro
Gln	Thr 1295		Thr	Pro	Val	Ser 1300	Arg	Thr	Thr	Ser	Ser 1305	Phe	Ser	His
Ser	Ser 1310		Asp	Ala	Thr	Pro 1315	Val	Met	Ala	Thr	Ser 1320	Pro	Arg	Thr
Glu	Ala 1325		Ser	Ala	Val	Leu 1330		Thr	Ile	Ser	Pro 1335	Gly	Ala	Pro
Glu	Met 1340		Thr	Ser		Ile 1345		Ser	Ser	Gly	Ala 1350	Ala	Thr	Ser
Thr	Thr 1355		Pro	Thr	Leu	Thr 1360	His	Ser	Pro	Gly	Met 1365	Pro	Glu	Thr
Thr	Ala 1370		Leu	Ser	Thr	His 1375	Pro	Arg	Thr	Glu	Thr 1380	Ser	Lys	Thr
Phe	Pro 1385		Ser	Thr	Val	Phe 1390		Gln	Val	Ser	Glu 1395	Thr	Thr	Ala
Ser	Leu 1400		Ile	Arg	Pro	Gly 1405		Glu	Thr	Ser	Thr 1410	Ala	Leu	Pro
Thr	Gln 1415		Thr	Ser	Ser	Leu 1420		Thr	Leu	Leu	Val 1425	Thr	Gly	Thr
Ser	Arg 1430		. Asp	Leu	Ser	Pro 1435		Ala	Ser	Pro	Gly 1440	Val	Ser	Ala
Lys	Thr 1445		a Pro	Leu	Ser	Thr 1450		Pro	Gly	Thr	Glu 1455	Thr	Ser	Thr
Met	11e		Thr	Ser	Thr	Leu 1465		Leu	ı Gly	Leu	1470	Glu	Thr	Thr

	_	_		mı	a	0	0	חות	C1	Th∽	202	Thr	Sor	Thr
Gly	Leu 1475	Leu	Ala	Thr	Ser	1480	ser	АІА	GIU	Int	Ser 1485	1111	ser	IIII
Leu	Thr 1490	Leu	Thr	Val	Ser	Pro 1495	Ala	Val	Ser		Leu 1500	Ser	Ser	Ala
Ser	Ile 1505	Thr	Thr	Asp	Lys	Pro 1510	Gln	Thr	Val	Thr	Ser 1515	Trp	Asn	Thr
Glu	Thr 1520	Ser	Pro	Ser	Val	Thr 1525		Val	Gly	Pro	Pro 1530	Glu	Phe	Ser
Arg	Thr 1535	Val	Thr	Gly	Thr	Thr 1540	Met	Thr	Leu	Ile	Pro 1545	Ser	Glu	Met
Pro	Thr 1550	Pro	Pro	Lys	Thr	Ser 1555	His	Gly	Glu	Gly	Val 1560	Ser	Pro	Thr
Thr	Ile 1565		Arg	Thr	Thr	Met 1570		Glu	Ala	Thr	Asn 1575	Leu	Ala	Thr
Thr	Gly 1580		Ser	Pro	Thr	Val 1585	Ala	Lys	Thr	Thr	Thr 1590	Thr	Phe	Asn
Thr	Leu 1595		Gly	Ser	Leu	Phe 1600	Thr	Pro	Leu	Thr	Thr 1605	Pro	Gly	Met
Ser	Thr 1610		Ala	Ser	Glu	Ser 1615		Thr	Ser	Arg	Thr 1620		Tyr	Asn
His	Arg 1625		Trp	Ile	Ser	Thr 1630	Thr	Ser	Ser	Tyr	Asn 1635	Arg	Arg	Tyr
Trp	Thr 1640		Ala	Thr	Ser	Thr 1645		Val	Thr	Ser	Thr 1650	Phe	Ser	Pro
Gly	Ile 1655		Thr	Ser	Ser	Ile 1660	Pro	Ser	Ser	Thr	Ala 1665		Thr	Val
	Phe 1670		Val	Pro	Phe	Thr 1675	Leu	Asn	Phe	Thr	Ile 1680	Thr	Asn	Leu
Gln	Tyr 1685		Glu	Asp	Met	Arg 1690		Pro	Gly	Ser	Arg 1695		Phe	Asn
Ala	Thr 1700		Arg	Glu	Leu	Gln 1705	Gly	Leu	Leu	Lys	Pro 1710	Leu	Phe	Arg
Asn	Ser 1715		Leu	Glu	Tyr	Leu 1720		Ser	Gly	Cys	Arg 1725	Leu	Ala	Ser
Leu	Arg 1730		Glu	Lys	Asp	Ser 1735		Ala	Met	Ala	Val 1740		Ala	Ile
Cys	Thr 1745		Arg	Pro	Asp	Pro 1750		Asp	Leu	Gly	Leu 1755		Arg	Glu
Arg	Leu 1760		Trp	Glu	Leu	Ser 1765		Leu	Thr	Asn	Gly 1770	Ile	Gln	Glu

Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly 1775 1780 1785	
Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr Pro Gly Thr 1790 1795 1800	
Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser Ser Pro 1805 1810 1810	
Ser Pro Thr 1820	
<210> 83	
<211> 468	
<212> DNA	
<213> Homo sapiens	
<400> 83	60
gccacagtcc cattcatggt gccattcacc ctcaacttca ccatcaccaa cctgcagtac	
gaggaggaca tgcggcaccc tggttccagg aagttcaacg ccacagagag agaactgcag	
ggtctgctca aaccettgtt caggaatage agtctggaat acctetatte aggetgeaga	
ctagecteae teaggecaga gaaggatage teagecatgg cagtggatge catetgeata	240
categeeetg accetgaaga ceteggaetg gacagagage gactgtaetg ggagetgage	300
aatctgacaa atggcatcca ggagctgggc ccctacaccc tggaccggaa cagtctctat	360
gtcaatggtt tcacccatcg aagctctatg cccaccacca gcactcctgg gacctccaca	420
gtggatgtgg gaacctcagg gactccatcc tccagcccca gccccacg	468
.010	
<210> 84	
<211> 474	
<212> DNA	
<213> Homo sapiens	
<400> 84 gctgctggcc ctctcctgat gccgttcacc ctcaacttca ccatcaccaa cctgcagtac	: 60
gaggaggaca tgcgtcgcac tggctccagg aagttcaaca ccatggagag tgtcctgcag	
ggtctgctca agcccttgtt caagaacacc agtgttggcc ctctgtactc tggctgcaga	

ttgaccttgc tcaggcccaa gaaagatggg gcagccactg gagtggatgc catctgcacc

caccgccttg	accccaaaag	ccctggactc	aacagggagc	agctgtactg	ggagctaagc	300
aaactgacca	atgacattga	agagctgggc	ccctacaccc	tggacaggaa	cagtctctat	360
gtcaatggtt	tcacccatca	gagetetgtg	tccaccacca	gcactcctgg	gacctccaca	420
gtggatctca	gaacctcagg	gactccatcc	tccctctcca	gccccacaat	tatg	474
<210> 85						
<211> 468						
<211> 400 <212> DNA						
\213\/ HOIII	o sapiens					
<400> 85						
	ctctcctggt	accattcacc	ctcaacttca	ccatcaccaa	cctgcagtat	60
ggggaggaca	tgggtcaccc	tggctccagg	aagttcaaca	ccacagagag	ggtcctgcag	120
ggtctgcttg	gtcccatatt	caagaacacc	agtgttggcc	ctctgtactc	tggctgcaga	180
ctgacctctc	tcaggtctga	gaaggatgga	gcagccactg	gagtggatgc	catctgcatc	240
catcatcttg	accccaaaag	ccctggactc	aacagagagc	ggctgtactg	ggagctgagc	300
caactgacca	atggcatcaa	agagctgggc	ccctacaccc	tggacaggaa	cagtctctat	360
gtcaatggtt	tcacccatcg	gacctctgtg	cccaccacca	gcactcctgg	gacctccaca	420
gtggaccttg	gaacctcagg	gactccattc	tccctcccaa	gccccgca		468
<210> 86						
<211> 465						
<211> 403						
	o sapiens					
1220	o bapiono					
<400> 86						
	ctctcctggt	gctgttcacc	ctcaacttca	ccatcaccaa	cctgaagtat	60
gaggaggaca	tgcatcgccc	tggctccagg	aagttcaaca	ccactgagag	ggtcctgcag	120
actctgcttg	gtcctatgtt	caagaacacc	agtgttggcc	ttctgtactc	tggctgcaga	180
ctgaccttgc	tcaggtccga	gaaggatgga	gcagccactg	gagtggatgc	catctgcacc	240

caccgtcttg accccaaaag ccctggactg gacagagagc agctatactg ggagctgagc

cagctgacca atggcat	caa agagetggge	ccctacaccc	tggacaggaa	cagtctctat	360
gtcaatggtt tcaccca	ttg gatccctgtg	cccaccagca	gcactcctgg	gacctccaca	420
gtggaccttg ggtcagg	gac tccatcctcc	ctccccagcc	ccaca		465
<210> 87					
<211> 468					
<212> DNA					
<213> Homo sapien	S				
<400> 87					
gctgctggcc ctctcct	ggt gccattcacc	ctcaacttca	ccatcaccaa	cctgcagtac	60
gaggaggaca tgcatca	ecc aggetecagg	aagttcaaca	ccacggagcg	ggtcctgcag	120
ggtctgcttg gtcccat	gtt caagaacacc	agtgtcggcc	ttctgtactc	tggctgcaga	180
ctgaccttgc tcaggtc	cga gaaggatgga	gcagccactg	gagtggatgc	catctgcacc	240
caccgtcttg accccaa	aag ccctggagtg	gacagggagc	agctatactg	ggagctgagc	300
cagetgacea atggeat	caa agagctgggt	ccctacaccc	tggacagaaa	cagtctctat	360
gtcaatggtt tcaccca	tca gacctctgcg	cccaacacca	gcactcctgg	gacctccaca	420
gtggaccttg ggacctc	agg gactccatcc	tccctcccca	gccctaca		468
212					
<210> 88					
<211> 468					
<212> DNA					
<213> Homo sapien	s				
<220>					
<221> misc_featur	e				
<222> (1)(468)					
<223> All N's = a	ny nucleotide				
<400> 88					
ncnnctgncc ctctcct	gnt nccnttcacc	ntcaacttna	ccatcaccaa	cctgcantan	60
gnggannaca tgennen	iccc nggntccagg	aagttcaaca	ccacngagng	ngtnctgcag	120

<400> 90

ggtctgctnn nr	nccentntt	caagaacacc	agtgttggcc	ctctgtactc	tggctgcaga	180
ctgaccttgc to	caggtccga	gaaggatgga	gcagccactg	gagtggatgc	catctgcacc	240
caccgtcttg ac	cccaaaag	ccctggagtg	gacagggagc	agctatactg	ggagctgagc	300
cagctgacca at	tggcatcaa	agagctgggt	ccctacaccc	tggacagaaa	cagtctctat	360
gtcaatggtt to	cacccatca	gacctctgcg	cccaacacca	gcactcctgg	gacctccaca	420
gtggaccttg gg	gacctcagg	gactccatcc	tccctcccca	gccctaca		468
1010						
<210> 89						
<211> 468						
<212> DNA						
<213> Homo s	sapiens					
<400> 89 tetgetggee et	tctcctggt	gccattcacc	ctcaacttca	ccatcaccaa	cctgcagtac	60
gaggaggaca to	gcatcaccc	aggctccagg	aagttcaaca	ccacggagcg	ggtcctgcag	120
ggtctgcttg gt	tcccatgtt	caagaacacc	agtgtcggcc	ttctgtactc	tggctgcaga	180
ctgaccttgc to	caggcctga	gaagaatggg	gcagccactg	gaatggatgc	catctgcagc	240
caccgtcttg ac	cccaaaag	ccctggactc	aacagagagc	agctgtactg	ggagctgagc	300
cagctgaccc at	tggcatcaa	agagctgggc	ccctacaccc	tggacaggaa	cagtctctat	360
gtcaatggtt to	cacccatcg	gagctctgtg	gccccacca	gcactcctgg	gacctccaca	420
gtggaccttg gg	gacctcagg	gactccatcc	tccctcccca	gccccaca		468
<210> 90						
<211> 468						
<212> DNA						
<213> Homo s	sapiens					

acagetgtte eteteetggt geegtteace eteaacttta eeateaceaa tetgeagtat

ggggaggaca tgcgtcaccc tggctccagg aagttcaaca ccacagagag ggtcctgcag

ggtctgcttg gtcccttgtt caagaactcc agtgtcggcc ctctgtactc tggctgcaga

60

120

ctgatctctc	tcaggtctga	gaaggatggg	gcagccactg	gagtggatgc	catctgcacc	240
caccacctta	accctcaaag	ccctggactg	gacagggagc	agctgtactg	gcagctgagc	300
cagatgacca	atggcatcaa	agagctgggc	ccctacaccc	tggaccggaa	cagtctctac	360
gtcaatggtt	tcacccatcg	gagctctggg	ctcaccacca	gcactccttg	gacttccaca	420
gttgaccttg	gaacctcagg	gactccatcc	cccgtcccca	gccccaca		468
<210> 91						
<211> 468						
<212> DNA						
	o sapiens					
<400> 91						
	ctctcctggt	gccattcacc	ctcaacttca	ccatcaccaa	cctgcagtat	60
gaggaggaca	tgcatcgccc	tggatctagg	aagttcaaca	ccacagagag	ggtcctgcag	120
ggtctgctta	gtcccatttt	caagaactcc	agtgttggcc	ctctgtactc	tggctgcaga	180
ctgacctctc	tcaggcccga	gaaggatggg	gcagcaactg	gaatggatgc	tgtctgcctc	240
taccacccta	atcccaaaag	acctggactg	gacagagagc	agctgtactg	ggagctaagc	300
cagctgaccc	acaacatcac	tgagctgggc	ccctacagcc	tggacaggga	cagtctctat	360
gtcaatggtt	tcacccatca	gaactctgtg	cccaccacca	gtactcctgg	gacctccaca	420
gtgtactggg	caaccactgg	gactccatcc	tccttccccg	gccacaca		468
<210> 92						
<211> 468						
<212> DNA						
<213> Homo	sapiens					
	•					
<400> 92						
	ctctcctgat	accattcact	ttcaacttta	ccatcaccaa	cctgcattat	60
gaggaaaaca	tgcaacaccc	tggttccagg	aagttcaaca	ccacggagag	ggttctgcag	120
ggtctgctca	agcccttgtt	caagaacacc	agtgttggcc	ctctgtactc	tggctgcaga	180
ctgacctctc	tcaggcccga	gaaggatggg	gcagcaactg	gaatggatgc	tgtctgcctc	240

taccacceta ateccaaaag acetgggetg gacagagage agetgtaetg ggagetaage

cagctg	accc	acaacatcac	tgagctgggc	ccctacagcc	tggacaggga	cagtctctat	360
gtcaat	ggtt	tcacccatca	gaactctgtg	cccaccacca	gtactcctgg	gacctccaca	420
gtgtac	tggg	caaccactgg	gactccatcc	tecttececg	gccacaca		468
<210>	93						
<211>	468						
<212>	DNA						
<213>	Homo	sapiens					
<400>	93						
gagcct	ggcc	ctctcctgat	accattcact	ttcaacttta	ccatcaccaa	cctgcattat	60
gaggaa	aaca	tgcaacaccc	tggttccagg	aagttcaaca	ccacggagag	ggttctgcag	120
ggtctg	ctca	agcccttgtt	caagaacacc	agtgttggcc	ctctgtactc	tggctgcaga	180
ctgacc	ttgc	tcagacctga	gaagcatgag	gcagccactg	gagtggacac	catctgtacc	240
caccgc	gttg	atcccatcgg	acctggactg	gacagggagc	ggctatactg	ggagctgagc	300
cagctga	acca	acagcattac	cgaactggga	ccctacaccc	tggacaggga	cagtctctat	360
gtcaat	ggct	tcaaccctcg	gagctctgtg	ccaaccacca	gcactcctgg	gacctccaca	420
				tccctgcctg			468
<210>	94						
<211>	468						
<212>	DNA						
<213>	Homo	sapiens					
<220>							
<221>	misc	feature					
<222>	_	. (468)					
		, ,					
\	HTT [N's = anv ni	ucleotide				

gaggaaaaca	tgcaacaccc	tggttccagg	aagttcaaca	ccacggagag	ggttctgcag	120
ggtctgctca	agcccttgtt	caagaacacc	agtgttggcc	ctctgtactc	tggctgcaga	180
ctgaccttgc	tcagacctga	gaagcatgag	gcagccactg	gagtggacac	catctgtacc	240
caccgcgttg	atcccatcgg	acctggactg	nacagngagc	ngctntactg	ggagctnagc	300
canctgacca	annncatcnn	ngagctgggn	ccctacaccc	tggacaggna	cagtctctat	360
gtcaatggtt	tcacccatcn	ganctctgng	cccaccacca	gcactcctgg	gacctccaca	420
gtgnacntng	gnacctcngg	gactccatcc	teenteecen	gccncaca		468
<210> 95						

<211> 468 <212> DNA

<213> Homo sapiens

<400> 95		gggattgagg	ctcaacttca	ccatcaccaa	cctgcagtac	60
tetgetggee	eteteetggt	gecatteace	Cicaacica	ccaccaccaa	0009009000	
gaggaggaca	tgcatcaccc	aggctccagg	aagttcaaca	ccacggagcg	ggtcctgcag	120
ggtctgcttg	gtcccatgtt	caagaacacc	agtgtcggcc	ttctgtactc	tggctgcaga	180
ctgaccttgc	tcaggcctga	gaagaatggg	gcagccactg	gaatggatgc	catctgcagc	240
caccgtcttg	accccaaaag	ccctggactc	gacagagagc	agctgtactg	ggagctgagc	300
cagctgaccc	atggcatcaa	agagctgggc	ccctacaccc	tggacaggaa	cagtctctat	360
gtcaatggtt	tcacccatcg	gagctctgtg	gcccccacca	gcactcctgg	gacctccaca	420
gtggaccttg	ggacctcagg	gactccatcc	tccctcccca	gccccaca		468

<210> 96 <211> 468 <212> DNA <213> Homo sapiens

<400> 96
acagctgttc ctctcctggt gccgttcacc ctcaacttta ccatcaccaa tctgcagtat 60
ggggaggaca tgcgtcaccc tggctccagg aagttcaaca ccacagagag ggtcctgcag 120
ggtctgcttg gtcccttgtt caagaactcc agtgtcggcc ctctgtactc tggctgcaga 180

ctgatctctc	tcaggtctga	gaaggatggg	gcagccactg	gagtggatgc	catctgcacc	240
caccacctta	accctcaaag	ccctggactg	gacagggagc	agctgtactg	gcagctgagc	300
cagatgacca	atggcatcaa	agagctgggc	ccctacaccc	tggaccggaa	cagtctctac	360
gtcaatggtt	tcacccatcg	gagctctggg	ctcaccacca	gcactccttg	gacttccaca	420
gttgaccttg	gaacctcagg	gactccatcc	cccgtcccca	gccccaca		468
<210> 97						
<211> 468						
<212> DNA						
	o sapiens					
<400> 97						
	ctctcctggt	gccattcacc	ctaaacttca	ccatcaccaa	cctgcagtat	60
gaggaggaca	tgcatcgccc	tggatctagg	aagttcaacg	ccacagagag	ggtcctgcag	120
ggtctgctta	gtcccatatt	caagaactcc	agtgttggcc	ctctgtactc	tggctgcaga	180
ctgacctctc	tcaggcccga	gaaggatggg	gcagcaactg	gaatggatgc	tgtctgcctc	240
taccacccta	atcccaaaag	acctggactg	gacagagagc	agctgtactg	ggagctaagc	300
cagctgaccc	acaacatcac	tgagctgggc	ccctacagcc	tggacaggga	cagtctctat	360
gtcaatggtt	tcacccatca	gagctctatg	acgaccacca	gaactcctga	tacctccaca	420
atgcacctgg	caacctcgag	aactccagcc	tccctgtctg	gacctacg		468
<210> 98						
<211> 474						
<212> DNA						
<213> Homo	o sapiens					
	•					
<400> 98						
	ctctcctggt	gctattcaca	atcaactgca	ccatcaccaa	cctgcagtac	60
gaggaggaca	tgcgtcgcac	tggctccagg	aagttcaaca	ccatggagag	tgtcctgcag	120
ggtctgctca	agcccttgtt	caagaacacc	agtgttggcc	ctctgtactc	tggctgcaga	180

ttgaccttgc tcaggcccaa gaaagatggg gcagccactg gagtggatgc catctgcacc

240

caccgccttg accccaaaag ccctggactc aacagggagc agctgt	actg ggagctaagc 300
aaactgacca atgacattga agagctgggc ccctacaccc tggaca	ggaa cagtctctat 360
gtcaatggtt tcacccatca gagetetgtg tccaccacca gcacte	ctgg gacctccaca 420
gtggatetea gaaceteagg gaetecatee teeeteteea geecea	caat tatg 474
<210> 99	
<211> 468	
<212> DNA	
<213> Homo sapiens	
•	
<220>	
<221> misc_feature	
<222> (1)(468)	
<223> All N's = any nucleotide	
<400> 99	
nennetgnee eteteetgnt neentteace nteaacttna ceateac	
gnggannaca tgennenece nggntecagg aagtteaaca ceaenga	agag ggtcctacag 120
ggtctgctca ggcccttgtt caagaacacc agtgtcagct ctctgta	actc tggttgcaga 180
ctgaccttgc tcaggcctga gaaggatggg gcagccacca gagtgga	atgc tgcctgcacc 240
taccgccctg atcccaaaag ccctggactg gacagagagc aactata	actg ggagetgage 300
cagetaaeee acageateae tgagetggga eeetaeaeee tggaeag	gggt cagtctctat 360
gtcaatgget teaaceeteg gagetetgtg ecaaceacea geacted	etgg gacctccaca 420
gtgcacctgg caacctctgg gactccatcc teectgeetg gecacae	a 468
<210> 100	
<211> 468	
<212> DNA	
<213> Homo sapiens	
-10 TOMO DUPLOTO	

gaagaaaaca	tgcaacaccc	tggttccagg	aagttcaaca	ccacggagag	ggttctgcag	120
ggtctgctca	agcccttgtt	caagagcacc	agcgttggcc	ctctgtactc	tggctgcaga	180
ctgaccttgc	tcagacctga	gaaacatggg	gcagccactg	gagtggacgc	catctgcacc	240
ctccgccttg	atcccactgg	tcctggactg	gacagagagc	ggctatactg	ggagctgagc	300
cagctgacca	acagcgttac	agagctgggc	ccctacaccc	tggacaggga	cagtctctat	360
gtcaatggct	tcacccagcg	gagctctgtg	ccaaccacca	gtattcctgg	gacctctgca	420
gtgcacctgg	aaacctctgg	gactccagcc	tecetecetg	gccacaca		468
<210> 101						
<211> 468						
<212> DNA						
<213> Hom	o sapiens					
<400> 101	ctctcctggt	gccattcacc	ctcaacttca	ctatcaccaa	cctgcagtat	60
	tgcgtcaccc					120
	agcccttgtt					180
	tcaggcctga					240
	accctctaaa					300
	gtggcatcat					360
	tcacccatcg					420
	gaacctctga					4 68
<210> 102						
<211> 468						
<212> DNA						
<213> Hom	o sapiens					

<400> 102 gtgcctggcc ctctcctggt gccattcacc ctcaacttca ccatcaccaa cttgcagtat 60 gaggaggcca tgcgacaccc tggctccagg aagttcaata ccacggagag ggtcctacag 120

ggtctgctca	ggcccttgtt	caagaatacc	agtatcggcc	ctctgtactc	cagctgcaga	180
ctgaccttgc	tcaggccaga	gaaggacaag	gcagccacca	gagtggatgc	catctgtacc	240
caccaccctg	accctcaaag	ccctggactg	aacagagagc	agctgtactg	ggagctgagc	300
cagctgaccc	acggcatcac	tgagctgggc	ccctacaccc	tggacaggga	cagtctctat	360
gtcgatggtt	tcactcattg	gagccccata	ccgaccacca	gcactcctgg	gacctccata	420
gtgaacctgg	gaacctctgg	gatcccacct	tccctccctg	aaactaca		468

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 103 ncnnctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan 60 gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagag ggttctgcag 120 ggtctgctca aacccttgtt caggaatagc agtctggaat acctctattc aggctgcaga 180 ctagcctcac tcaggccaga gaaggatagc tcagccatgg cagtggatgc catctgcaca 240 categeeetg accetgaaga ceteggaetg gacagagage gactgtaetg ggagetgage 300 aatctgacaa atggcatcca ggagctgggc ccctacaccc tggaccggaa cagtctctac 360 gtcaatggtt tcacccatcg gagctctggg ctcaccacca gcactccttg gacttccaca 420 gttgaccttg gaacctcagg gactccatcc cccgtcccca gccccaca 468

<210> 104

<211> 468

<212> DNA

<213> Homo sapiens

<400> actgct	104 ggcc	ctctcctggt	gccattcacc	ctcaacttca	ccatcaccaa	cctgcagtat	60
gaggag	gaca	tgcatcgccc	tggttccagg	aggttcaaca	ccacggagag	ggttctgcag	120
ggtctg	ctca	cgcccttgtt	caagaacacc	agtgttggcc	ctctgtactc	tggctgcaga	180
ctgacc	ttgc	tcagacctga	gaagcaagag	gcagccactg	gagtggacac	catctgtacc	240
caccgc	gttg	atcccatcgg	acctggactg	gacagagagc	ggctatactg	ggagctgagc	300
cagetg	acca	acagcatcac	agagctggga	ccctacaccc	tggataggga	cagtctctat	360
gtcaat	ggct	tcaacccttg	gagctctgtg	ccaaccacca	gcactcctgg	gacctccaca	420
gtgcac	ctgg	caacctctgg	gactccatcc	tccctgcctg	gccacaca		468
<210>	105						
<211>	468						
<212>	DNA						
<213>	Homo	sapiens					
	105						

geceetgtee etetettgat accatteace eteaaettta eeateacega eetgeattat 60 gaagaaaaca tgcaacaccc tggttccagg aagttcaaca ccacggagag ggttctgcag 120 ggtctgctca agcccttgtt caagagcacc agcgttggcc ctctgtactc tggctgcaga 180 ctgaccttgc tcagacctga gaaacatggg gcagccactg gagtggacgc catctgcacc 240 ctccgccttg atcccactgg tcctggactg gacagagagc ggctatactg ggagctgagc 300 cagctgacca acagcgttac agagctgggc ccctacaccc tggacaggga cagtctctat 360 gtcaatggct tcacccatcg gagctctgtg ccaaccacca gtattcctgg gacctctgca 420 gtgcacctgg aaacctctgg gactccagcc tccctccctg gccacaca 468

<210> 106

<211> 468

<212> DNA

<213> Homo sapiens

<400> 108

gcccctggcc	ctctcctggt	gccattcacc	ctcaacttca	ctatcaccaa	cctgcagtat	60
gaggaggaca	tgcgtcaccc	tggttccagg	aagttcagca	ccacggagag	agtcctgcag	120
ggtctgctca	agcccttgtt	caagaacacc	agtgtcagct	ctctgtactc	tggttgcaga	180
ctgaccttgc	tcaggcctga	gaaggatggg	gcagccacca	gagtggatgc	tgtctgcacc	240
catcgtcctg	accccaaaag	ccctggactg	gacagagagc	ggctgtactg	gaagctgagc	300
cagctgaccc	acggcatcac	tgagctgggc	ccctacaccc	tggacaggca	cagtctctat	360
gtcaatggtt	tcacccatca	gagctctatg	acgaccacca	gaactcctga	tacctccaca	420
atgcacctgg	caacctcgag	aactccagcc	tccctgtctg	gacctacg		468
<210> 107						
<211> 468						
<212> DNA						
<213> Homo	sapiens					
<400> 107 accgccagcc	ctctcctggt	gctattcaca	attaacttca	ccatcactaa	cctgcggtat	60
gaggagaaca	tgcatcaccc	tggctctaga	aagtttaaca	ccacggagag	agtccttcag	120
ggtctgctca	ggcctgtgtt	caagaacacc	agtgttggcc	ctctgtactc	tggctgcaga	180
ctgaccacgc	tcaggcccaa	gaaggatggg	gcagccacca	aagtggatgc	catctgcacc	240
taccgccctg	atcccaaaag	ccctggactg	gacagagagc	agctatactg	ggagctgagc	300
cagctaaccc	acagcatcac	tgagctgggc	ccctacaccc	aggacaggga	cagtctctat	360
gtcaatggct	tcacccatcg	gagctctgtg	ccaaccacca	gtattcctgg	gacctctgca	420
gtgcacctgg	aaacctctgg	gactccagcc	tccctccctg	gccacaca		468
<210> 108						
<211> 468						
<212> DNA						
<213> Homo	sapiens					

geceetggee eteteetggt gecatteace eteaacttea etateaceaa eetgeagtat

gaggaggaca tgcgtcaccc tggttccagg aagttcaaca ccacggagag agtcctgcag

60

120

ggtctgctca	agcccttgtt	caagagcacc	agtgttggcc	ctctgtactc	tggctgcaga	180
ctgaccttgc	tcaggcctga	aaaacgtggg	gcagccaccg	gcgtggacac	catctgcact	240
caccgccttg	accctctaaa	cccaggactg	gacagagagc	agctatactg	ggagctgagc	300
aaactgaccc	gtggcatcat	cgagctgggc	ccctacctcc	tggacagagg	cagtctctat	360
gtcaatggtt	tcacccatcg	gacctctgtg	cccaccacca	gcactcctgg	gacctccaca	420
gtggaccttg	gaacctcagg	gactccattc	tccctcccaa	gccccgca		468

<211> 465

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(465)

<223> All N's = any nucleotide

<400> 109 nennetgnee eteteetgnt neentteace nteaacttna ceateaceaa eetgeantan 60 gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagag ggtcctgcag 120 actetgettg gteetatgtt caagaacace agtgttggee ttetgtacte tggetgeaga 180 ctgaccttgc tcaggtccga gaaggatgga gcagccactg gagtggatgc catctgcacc 240 caccgtcttg accccaaaag ccctggagtg gacagggagc aactatactg ggagctgagc 300 cagctgacca atggcattaa agaactgggc ccctacaccc tggacaggaa cagtctctat 360 gtcaatgggt tcacccattg gatccctgtg cccaccagca gcactcctgg gacctccaca 420 gtggaccttg ggtcagggac tccatcctcc ctccccagcc ccaca 465

<210> 110

<211> 468

<212> DNA

<213> Homo sapiens

<400> 110	
actgctggcc ctctcctggt gccgttcacc ctcaacttca ccatcaccaa cctgaac	gtac 60
gaggaggaca tgcattgccc tggctccagg aagttcaaca ccacagagag agtcctc	gcag 120
agtotgottg gtoccatgtt caagaacaco agtgttggco etetgtacto tggctgo	caga 180
ctgacettge teaggteega gaaggatgga geageeactg gagtggatge eatetge	cacc 240
caccgtcttg accccaaaag ccctggagtg gacagggagc agctatactg ggagctg	gagc 300
cagetgaeca atggeatcaa agagetgggt eeetaeaeee tggaeagaaa eagtete	ctat 360
gtcaatggtt tcacccatca gacctetgcg cccaacacca gcactectgg gacctec	caca 420
gtggaccttg ggacctcagg gactccatcc teceteeca gecetaca	468
2010. 111	
<210> 111	
<211> 465	
<212> DNA	
<213> Homo sapiens	
<220>	
<221> misc_feature	
<222> (1)(465)	
<223> All N's = any nucleotide	

<400> 111 nennetgnee eteteetgnt neentteace nteaacttna ecateaceaa eetgeantan 60 gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120 ggtctgctnn nncccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180 ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240 caccnnentn ancecaaaag neetggaetg nacagngage ngetntaetg ggagetnage 300 canctgacca annncatenn ngagetgggn ccctacaccc tggacaggna cagtetetat 360 gtcaatggtt tcacccattg gatccctgtg cccaccagca gcactcctgg gacctccaca 420 gtggaccttg ggtcagggac tccatcctcc ctccccagcc ccaca 465

60

120

180

240

300

360

420

468

<210> 112 <211> 468 <212> DNA <213> Homo sapiens <220> <221> misc_feature <222> (1)..(468) <223> All N's = any nucleotide <400> 112 actgctggcc ctctcctggt gccgttcacc ctcaacttca ccatcaccaa cctgaagtac gaggaggaca tgcattgccc tggctccagg aagttcaaca ccacagagag agtcctgcag agtctgcttg gtcccatgtt caagaacacc agtgttggcc ctctgtactc tggctgcaga etgacetege teaggteega gaaggatgga geageeactg gagtggatge catetgeace caccgtgttg accccaaaag ccctggagtg gacagggagc agctatactg ggagctgagc cagctgacca atggcatcaa agagctgggt ccctacaccc tggacagaaa cagtctctat gtcaatggtt tcacccatca gacctctgcg cccaacacca gcactcctgg gacctccaca gtgnachtng gnacctengg gactecatee teenteeen geeneaca <210> 113 <211> 468 <212> DNA <213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide

<400> 113 tctgctggcc	ctctcctggt	gccattcacc	ctcaacttca	ccatcaccaa	cctgcagtac	60
gaggaggaca	tgcatcaccc	aggctccagg	aagttcaaca	ccacggagcg	ggtcctgcag	120
ggtctgcttg	gtcccatgtt	caagaacacc	agtgtcggcc	ttctgtactc	tggctgcaga	180
ctgaccttgc	tcaggcctga	gaagaatggg	gcaaccactg	gaatggatgc	catctgcacc	240
caccgtcttg	accccaaaag	ccctggactg	nacagngagc	ngctntactg	ggagctnagc	300
canctgacca	annncatcnn	ngagctgggn	ccctacaccc	tggacaggna	cagtctctat	360
gtcaatggtt	tcacccatcn	ganctctgng	cccaccacca	gcactcctgg	gacctccaca	420
gtgnacntng	gnacctcngg	gactccatcc	tccntccccn	gccncaca		468

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 114						
	ctctcctgnt	nccnttcacc	ntcaacttna	ccatcaccaa	cctgcantan	60
gnggannaca	tgcnncnccc	nggntccagg	aagttcaaca	ccacngagag	ggttctgcag	120
ggtctgctca	aacccttgtt	caggaatagc	agtctggaat	acctctattc	aggctgcaga	180
ctagcctcac	tcaggccaga	gaaggatagc	tcagccatgg	cagtggatgc	catctgcaca	240
catcgccctg	accctgaaga	cctcggactg	gacagagagc	gactgtactg	ggagctgagc	300
aatctgacaa	atggcatcca	ggagctgggc	ccctacaccc	tggaccggaa	cagtctctat	360
gtcaatggtt	tcacccatcg	aagctctatg	cccaccacca	gcactcctgg	gacctccaca	420
gtggatgtgg	gaacctcagg	gactccatcc	tccagcccca	gccccacg		468

<211> 468 <212> DNA <213> Homo sapiens <400> 115 actgctggcc ctctcctgat accattcacc ctcaacttca ccatcaccaa cctgcagtat 60 ggggaggaca tgggtcaccc tggctccagg aagttcaaca ccacagagag ggtcctgcag 120 ggtctgcttg gtcccatatt caagaacacc agtgttggcc ctctgtactc tggctgcaga 180 ctgacctctc tcaggtctga gaaggatgga gcagccactg gagtggatgc catctgcatc 240 300 catcatcttg accccaaaag ccctggactc aacagagagc ggctgtactg ggagctgagc caactgacca atggcatcaa agagctgggc ccctacaccc tggacaggaa cagtctctat 360 gtcaatggtt tcacccatcg gacctctgtg cccaccacca gcactcctgg gacctccaca 420 gtggaccttg gaacctcagg gactccattc tccctcccaa gccccgca 468 <210> 116 <211> 468 <212> DNA <213> Homo sapiens <220> <221> misc_feature <222> (1)..(468)<223> All N's = any nucleotide <400> 116 60 actgctggcc ctctcctggt gctgttcacc ctcaacttca ccatcaccaa cctgaagtat 120 gaggaggaca tgcatcgccc tggctccagg aagttcaaca ccactgagag ggtcctgcag actotyctty gtoctatytt caagaacacc agtyttygcc ttctytactc tygctycaga 180 ctgacettge teaggteega gaaggatgga geageeactg gagtggatge catetgeace 240 300 caccgtcttg accccaaaag ccctggactg nacagngage ngctntactg ggagctnage

canctgacca annncatenn ngagetgggn cectacacce tggacaggna cagtetetat

360

gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca	420
gtgnacntng gnacctengg gactecatee teenteecen geencaca	468
<210> 117	
<211> 468	
<212> DNA	
<213> Homo sapiens	
<220>	
<221> misc_feature	
<222> (1)(468)	
<223> All N's = any nucleotide	
<400> 117	
nennetgnee eteteetgnt neentteace nteaacttna ceateaceaa eetgeantan	60
gnggannaca tgennenece nggntecagg aagtteaaca ecaengagag agteetteag	120
ggtctgctca ggcctgtgtt caagaacacc agtgttggcc ctctgtactc tggctgcaga	180
ctgaccttgc tcaggcccaa gaaggatggg gcagccacca aagtggatgc catctgcacc	240
taccgccctg atcccaaaag ccctggactg gacagagagc agctatactg ggagctgagc	300
cagetaacee acageateae tgagetggge eectacacee aggacaggga cagtetetat	360
gtcaatggct tcacccatcg gagctctgtg ccaaccacca gtattcctgg gacctctgca	420
gtgcacctgg aaaccactgg gactccatcc teetteeeeg gecacaca	468
<210> 118	
<211> 468	
<212> DNA	
<213> Homo sapiens	
<u></u>	
<400> 118	60
gageetggee eteteetgat accatteact tteaaettta ceateaceaa eetgegttat	120
gaggaaaaca tgcaacaccc tggttccagg aagttcaaca ccacggagag ggttctgcag	120
ggtctgctca cgcccttgtt caagaacacc agtgttggcc ctctgtactc tggctgcaga	180

ctgaccttgc	tcagacctga	gaagcaggag	gcagccactg	gagtggacac	catctgtacc	240
caccgcgttg	atcccatcgg	acctggactg	gacagagagc	ggctatactg	ggagctgagc	300
cagctgacca	acagcatcac	agagctggga	ccctacaccc	tggataggga	cagtctctat	360
gtcgatggct	tcaacccttg	gagctctgtg	ccaaccacca	gcactcctgg	gacctccaca	420
gtgcacctgg	caacctctgg	gactccatcc	cccctgcctg	gccacaca		468
<210> 119						

<211> 468

<212> DNA .

<213> Homo sapiens

<400> 119 gcccctgtcc	ctctcttgat	accattcacc	ctcaacttta	ccatcaccga	cctgcattat	60
gaagaaaaca	tgcaacaccc	tggttccagg	aagttcaaca	ccacggagag	ggttctgcag	120
ggtctgctca	agcccttgtt	caagagcacc	agcgttggcc	ctctgtactc	tggctgcaga	180
ctgaccttgc	tcagacctga	gaaacatggg	gcagccactg	gagtggacgc	catctgcacc	240
ctccgccttg	atcccactgg	tcctggactg	gacagagagc	ggctatactg	ggagctgagc	300
cagctgacca	acagcatcac	agagctggga	ccctacaccc	tggataggga	cagtctctat	360
gtcaatggct	tcaacccttg	gagctctgtg	ccaaccacca	gcactcctgg	gacctccaca	420
gtgcacctgg	caacctctgg	gactccatcc	tccctgcctg	gccacaca		468

<210> 120

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<212>

<213>

DNA

<400> 120 actgctggcc ctctcctggt	gccgttcacc	ctcaacttca	ccatcaccaa	cctgaagtac	60
gaggaggaca tgcattgccc	tggctccagg	aagttcaaca	ccacagagag	agtcctgcag	120
agtctgcatg gtcccatgtt	caagaacacc	agtgttggcc	ctctgtactc	tggctgcaga	180
ctgaccttgc tcaggtccga	gaaggatgga	gcagccactg	gagtggatgc	catctgcacc	240
caccgtcttg accccaaaag	ccctggactg	nacagngagc	ngctntactg	ggagctnagc	300
canctgacca annncatcnn	ngagctgggn	ccctacaccc	tggacaggna	cagtctctat	360
gtcaatggtt tcacccaten	ganctctgng	cccaccacca	gcactcctgg	gacctccaca	420
gtgnacntng gnacctengg	gactccatcc	teenteecen	gccncaca		468
<010× 101					
<210> 121					
<211> 468					

<221> misc_feature <222> (1)..(468) <223> All N's = any nucleotide

Homo sapiens

<400> 121 60 ncnnctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan 120 gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 180 ggtctgctnn nncccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240 caccnnentn aneceaaaag neetggaetg nacagngage ngetntaetg ggagetnage 300 canctgacca acagcatcac agagctggga ccctacaccc tggataggga cagtctctat 360 gtcaatggtt tcacccatcg aagctctatg cccaccacca gtattcctgg gacctctgca 420 468 gtgcacctgg aaacctctgg gactccagcc tccctccctg gccacaca

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 122 gcccctggcc ctctcctggt gccattcacc ctcaacttca ctatcaccaa cctgcagtat 60 gaggaggaca tgcgtcaccc tggttccagg aagttcaaca ccacggagag agtcctgcag 120 ggtctgctca agcccttgtt caagagcacc agtgttggcc ctctgtactc tggctgcaga 180 ctgaccttgc tcaggcctga aaaacgtggg gcagccaccg gcgtggacac catctgcact 240 caccgccttg accctctaaa ccctggactg nacagngagc ngctntactg ggagctnagc 300 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360 gtcaatggtt tcacccatcn ganctetgng cccaccacca gcactcctgg gacctccaca 420 gtgnachtng gnacctengg gaeteeatee teenteeen geeneaea 468

<210> 123

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 123

ncnnctgncc	ctctcctgnt	nccnttcacc	ntcaacttna	ccatcaccaa	cctgcantan	60
gnggannaca	tgcnncnccc	nggntccagg	aagttcaaca	ccacngagng	ngtnctgcag	120
ggtctgctnn	nncccntntt	caagaacncc	agtgtnggcc	ntctgtactc	tggctgcaga	180
ctgacctnnc	tcaggncnga	gaagnatggn	gcagccactg	gantggatgc	catctgcanc	240
caccnncntn	ancccaaaag	ncctggactg	nacagngagc	ngctntactg	ggagctnagc	300
canctgacca	annncatcnn	ngagctgggn	ccctacaccc	tggacaggna	cagtctctat	360
gtcaatggtt	ttcaccctcg	gagctctgtg	ccaaccacca	gcactcctgg	gacctccaca	420
gtgcacctgg	caacctctgg	gactccatcc	tccctgcctg	gccacaca		468

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 124 60 gcccctgtcc ctctcttgat accattcacc ctcaacttta ccatcaccaa cctgcattat 120 gaagaaaaca tgcaacaccc tggttccagg aagttcaaca ccacggagcg ggtcctgcag ggtctgcttg gtcccatgtt caagaacaca agtgtcggcc ttctgtactc tggctgcaga 180 ctgacettge teaggeetga gaagaatggg geageeactg gaatggatge catetgeage 240 caccgtcttg accccaaaag ccctggactg nacagngagc ngctntactg ggagctnagc 300 canctgacca annncatenn ngagetgggn ccctacacce tggacaggna cagtetetat 360 gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420 gtgnacntng gnacctengg gactecatee teenteeen geeneaca 468

<210> 125

<211> 468

<212> DNA	
<213> Homo sapiens	
<220>	
<221> misc_feature	
<222> (1)(468)	
<223> All N's = any nucleotide	
<400> 125 ncnnctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan	60
gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagng ngtnctgcag	120
ggtctgctnn nncccntntt caagaacnce agtgtnggce ntctgtacte tggctgcaga	180
ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc	240
caccnnentn aneceaaaag neetggaetg nacagngage ngetntaetg ggagetnage	300
canctgacca annneatenn ngagetgggn eeetacaeee tggacaggna cagtetetat	360
gtcaatggtt tcacccatca gaactctgtg cccaccacca gtactcctgg gacctccaca	420
gtgtactggg caaccactgg gactccatcc tccttccccg gccacaca	468
<210> 126	
<211> 468	
<212> DNA	
<213> Homo sapiens	
<220>	
<221> misc_feature	
<222> (1)(468)	
<223> All N's = any nucleotide	
<400> 126 gagcctggcc ctctcctgat accattcact ttcaacttta ccatcaccaa cctgcattat	: 60
gaggaaaaca tgcaacaccc tggttccagg aagttcaaca ccacggagag ggttctgcag	

ggtctgctca	cgcccttgtt	caagaacacc	agtgttggcc	ctctgtactc	tggctgcaga	180
ctgaccttgc	tcagacctga	gaagcaggag	gcagccactg	gagtggacac	catctgtacc	240
caccgcgttg	atcccatcgg	acctggactg	nacagngagc	ngctntactg	ggagctnagc	300
canctgacca	annncatcnn	ngagctgggn	ccctacaccc	tggacaggna	cagtctctat	360
gtcaatggtt	tcacccatcn	ganctctgng	cccaccacca	gcactcctgg	gacctccaca	420
gtgnacntng	gnacctcngg	gactccatcc	tccntccccn	gccncaca		468

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 127 nennetgnee eteteetgnt neentteace nteaacttna ccateaceaa cetgeantan 60 gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120 ggtctgctnn nncccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180 240 ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc caccnnentn aneceaaaag neetggaetg nacagngage ngetntaetg ggagetnage 300 canctgacca annncatenn ngagetgggn ecetacaece tggacaggna cagtetetat 360 gtcaatggtt tcacccatcg gagetetgtg ccaaccacca gcagteetgg gacetecaca 420 gtgcacctgg caacctctgg gactccatcc tccctgcctg gccacaca 468

<210> 128

<211> 468

<212> DNA

<213> Homo sapiens

<220> <221> misc_feature <222> (1)..(468) <223> All N's = any nucleotide <400> 128 gcccctgtcc ctctcttgat accattcacc ctcaacttta ccatcaccaa cctgcattat 60 gaagaaaaca tgcaacaccc tggttccagg aagttcaaca ccacggagag ggttctgcag 120 ggtctgctca agcccttgtt caagagcacc agtgttggcc ctctgtactc tggctgcaga 180 ctgaccttgc tcagacctga gaaacatggg gcagccactg gagtggacgc catctgcacc 240 300 ctccgccttg atcccactgg tcctggactg nacagngage ngctntactg ggagetnage canctgacca annncatenn ngagetgggn eeetacaeee tggacaggna cagtetetat 360 gtcaatggtt tcacccaten ganetetgng cecaceacea geacteetgg gacetecaca 420 gtgnachtng gnacctengg gaeteeatee teenteeen geeneaca 468 <210> 129 <211> 468 <212> DNA <213> Homo sapiens <220> <221> misc_feature <222> (1)..(468) <223> All N's = any nucleotide <400> 129 nennetgnee eteteetgnt neentteace nteaacttna ecateaceaa eetgeantan 60 gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120

ggtctgctnn nncccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga

ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc

180

240

caccnncntn	ancccaaaag	ncctggactg	nacagngagc	ngctntactg	ggagctnagc	300
canctgacca	annncatenn	ngagctgggn	ccctacaccc	tggacaggna	cagtctctat	360
gtcaatggtt	tcacccatcg	gacctctgtg	cccaccacca	gcactcctgg	gacctccaca	420
gtgcacctgg	caacctctgg	gactccatcc	tccctgcctg	gccacaca		468

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 130 gcccctgtcc ctctcttgat accattcacc ctcaacttta ccatcaccaa cctgcagtat 60 gaggaggaca tgcatcgccc tggatctagg aagttcaaca ccacagagag ggtcctgcag 120 ggtctgctta gtcccatttt caagaactcc agtgttggcc ctctgtactc tggctgcaga 180 ctgacctctc tcaggcccga gaaggatggg gcagcaactg gaatggatgc tgtctgcctc 240 taccacccta atcccaaaag acctggactg nacagngagc ngctntactg ggagctnagc 300 canctgacca annncatenn ngagetgggn cectacacce tggacaggna cagtetetat 360 gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420 gtgnachtng gnacctengg gaeteeatee teenteeeen geeneaca 468

<210> 131

<211> 468

<212> DNA

<213> Homo sapiens

<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide
<400> 131
ncnnctgncc ctctcctgnt nccnttcace
gnggannaca tgcnncnccc nggntccage

nennetgnee eteteetgnt neentteace nteaacttna ccateaceaa cetgeantan 60 gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120 ggtctgctnn nncccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180 ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240 caccnnentn ancecaaaag neetggactg nacagngage ngetntactg ggagetnage 300 360 canctgacca annneatenn ngagetgggn cectacacce tggacaggna cagtetetat gtcaatggtt tcacccattg gagctctggg ctcaccacca gcactccttg gacttccaca 420 468 gttgaccttg gaacctcagg gactccatcc cccgtcccca gccccaca

<210> 132

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 132
actgctggcc ctctcctggt gccattcacc ctaaacttca ccatcacaa cctgcagtat 60
gaggaggaca tgcatcgccc tggatctagg aagttcaacg ccacagagag ggtcctgcag 120
ggtctgctta gtcccatatt caagaacacc agtgttggcc ctctgtactc tggctgcaga 180
ctgaccttgc tcagacctga gaagcaggag gcagccactg gagtggacac catctgtacc 240
caccgcgttg atcccatcgg acctggactg nacagngagc ngctntactg ggagctnagc 300
canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360

	gtcaat	ggtt	tcacccatcn	ganctctgng	cccaccacca	gcactcctgg	gacctccaca	420
	gtgnac	ntng	gnacctengg	gactccatcc	tccntccccn	gccncaca		468
	<210>	133						
	<211>	468						
		DNA						
	<213>	Homo	o sapiens					
	<220>							
	<221>	miso	c_feature					
	<222>	(1)	(468)					
	<223>	All	N's = any m	nucleotide				
	<400>	133						
						ccatcaccaa		60
	gnggani	naca	tgcnncnccc	nggntccagg	aagttcaaca	ccacngagng	ngtnctgcag	120
	ggtctg	ctnn	nncccntntt	caagaacncc	agtgtnggcc	ntctgtactc	tggctgcaga	180
	ctgacct	innc	tcaggncnga	gaagnatggn	gcagccactg	gantggatgc	catctgcanc	240
	caccnno	entn	ancccaaaag	ncctggactg	nacagngagc	ngctntactg	ggagctnagc	300
•	canctga	acca	annncatcnn	ngagctgggn	ccctacaccc	tggacaggna	cagtctctat	360
,	gtcaato	ggtt	tcacccatcg	gagctttggg	ctcaccacca	gcactccttg	gacttccaca	420
(gttgaco	cttg	gaacctcagg	gactccatcc	cccgtcccca	gccccaca		468
	<210>	134						
•	<211>	468						
•	<212>	DNA						
•	<213>	Homo	sapiens					

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<223> All N's = any nucleotide

<400> 134 actgctggcc ctctcctggt gccattcacc ctaaacttca ccatcaccaa cc	tgcagtat 60
gaggaggaca tgcatcgccc tggctccagg aagttcaaca ccacggagag gg	tccttcag 120
ggtctgctta cgcccttgtt caggaacacc agtgtcagct ctctgtactc tg	gttgcaga 180
ctgaccttgc tcaggcctga gaaggatggg gcagccacca gagtggatgc tg	tctgcacc 240
catcgtcctg accccaaaag ccctggactg nacagngagc ngctntactg gg	agctnagc 300
canctgacca annncatenn ngagetgggn ecetacaeee tggacaggna ca	gtctctat 360
gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg ga	ectccaca 420
gtgnacntng gnacetengg gactecatee teenteeeen geencaca	468
<210> 135	
<211> 465	
<212> DNA	
<213> Homo sapiens	
<220>	
<221> misc_feature	
<222> (1)(465)	

<400> 135 nennetgnee eteteetgnt neentteace nteaacttna ceateaceaa eetgeantan 60 gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120 ggtctgctnn nncccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180 ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240 caccnnentn aneceaaaag neetggaetg nacagngage ngetntaetg ggagetnage 300 canctgacca annncatenn ngagetgggn eectacaeee tggacaggna eagtetetat 360 gtcaatggtt tcacccattg gatccctgtg cccaccagca gcactcctgg gacctccaca 420 465 gtggacettg ggtcagggac tecateetee etececagee ecaca

<210> 136 <211> 468 <212> DNA <213> Homo sapiens <220>

<221> misc feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 136 actgctggcc ctctcctggt accattcacc ctcaacttca ccatcaccaa cctgcagtat 60 ggggaggaca tgggtcaccc tggctccagg aagttcaaca ccacagagag ggtcctgcag 120 ggtctgcttg gtcccatatt caagaacacc agtgttggcc ctctgtactc tggctgcaga 180 240 ctgacctctc tcaggtccga gaaggatgga gcagccactg gagtggatgc catctgcatc 300 catcatcttg accccaaaag ccctggactg nacagngagc ngctntactg ggagctnagc canctgacca annneatenn ngagetgggn cectacacce tggacaggna cagtetetat 360 420 qtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 468 gtgnacntng gnacctengg gactecatec tecnteecen geencaca

<210> 137

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 137 ncnnctgncc	ctctcctgnt	nccnttcacc	ntcaacttna	ccatcaccaa	cctgcantan	60
gnggannaca	tgcnncnccc	nggntccagg	aagttcaaca	ccacngagng	ngtnctgcag	120
ggtctgctnn	nncccntntt	caagaacncc	agtgtnggcc	ntctgtactc	tggctgcaga	180
ctgacctnnc	tcaggncnga	gaagnatggn	gcagccactg	gantggatgc	catctgcanc	240
caccnncntn	ancccaaaag	ncctggactg	nacagngagc	ngctntactg	ggagctnagc	300
canctgacca	annncatcnn	ngagctgggn	ccctacaccc	tggacaggna	cagtctctat	360
gtcaatggtt	tcacccatca	gacctttgcg	cccaacacca	gcactcctgg	gacctccaca	420
gtggaccttg	ggacctcagg	gactccatcc	tecetececa	gccctaca		468

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 138 totgctggcc ctctcctggt gccattcacc ctcaacttca ccatcaccaa cctgcagtac 60 gaggaggaca tgcatcaccc aggctccagg aagttcaaca ccacggagcg ggtcctgcag 120 ggtctgcttg gtcccatgtt caagaacacc agtgtcggcc ttctgtactc tggctgcaga 180 ctgaccttgc tcaggcctga gaagaatggg gcagccacca gagtggatgc tgtctgcacc 240 300 catcgtcctg accccaaaag ccctggactg nacagngage ngctntactg ggagetnage canctgacca annncatenn ngagetgggn ecetacacce tggacaggna cagtetetat 360 420 gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca gtgnachtng gnacctengg gaeteeatee teenteeeen geeneaca 468

<211> 468 <212> DNA <213> Homo sapiens <220> <221> misc_feature <222> (1)..(468) <223> All N's = any nucleotide <400> 139 60 nennetgnee eteteetgnt neentteace nteaacttna ecateaceaa eetgeantan gnggannaca tgcnncnccc nggntccagg aagttcaaca ccacngagag ggttctgcag 120 ggtctgctca agcccttgtt caagagcacc agtgttggcc ctctgtattc tggctgcaga 180 240 ctgaccttgc tcaggcctga gaaggacgga gtagccacca gagtggacgc catctgcacc 300 caccgccctg accccaaaat ccctgggcta gacagacage agctatactg ggagctgage cagctgaccc acagcatcac tgagctggga ccctacaccc tggataggga cagtctctat 360 420 gtcaatggtt tcacccageg gagetetgtg eccaecacca geaeteetgg gaettteaca 468 gtacageegg aaacetetga gaeteeatea teeeteeetg geeceaca <210> 140 <211> 468 <212> DNA <213> Homo sapiens <400> 140 gccactggcc ctgtcctgct gccattcacc ctcaatttta ccatcactaa cctgcagtat 60 gaggaggaca tgcatcgccc tggctccagg aagttcaaca ccacggagag ggtccttcag 120 ggtctgctta tgcccttgtt caagaacacc agtgtcagct ctctgtactc tggttgcaga 180 240 ctgaccttgc tcaggcctga gaaggatggg gcagccacca gagtggatgc tgtctgcacc catcgtcctg accccaaaag ccctggactg gacagagagc ggctgtactg gaagctgagc 300

cagctgaccc acggcatcac tgagctgggc ccctacaccc tggacaggca cagtctctat

360

gtcaatggtt	tcacccatca	gagctctatg	acgaccacca	gaactcctga	tacctccaca	420
atgcacctgg	caacctcgag	aactccagcc	tccctgtctg	gacctacg		468
<210> 141						
<210> 141						
<211> 468						
<212> DNA						
<213> Homo	o sapiens					
<400> 141 accgccagcc	ctctcctggt	gctattcaca	attaacttca	ccatcactaa	cctgcggtat	60
gaggagaaca	tgcatcaccc	tggctctaga	aagtttaaca	ccacggagag	agtccttcag	120
ggtctgctca	ggcctgtgtt	caagaacacc	agtgttggcc	ctctgtactc	tggctgcaga	180
ctgaccttgc	tcaggcccaa	gaaggatggg	gcagccacca	aagtggatgc	catctgcacc	240
taccgccctg	atcccaaaag	ccctggactg	gacagagagc	agctatactg	ggagctgagc	300
cagctaaccc	acagcatcac	tgagctgggc	ccctacaccc	tggacaggga	cagtctctat	360
gtcaatggtt	tcacacagcg	gagctctgtg	cccaccacta	gcattcctgg	gacccccaca	420
gtggacctgg	gaacatctgg	gactccagtt	tctaaacctg	gtccctcg		468
<210> 142						
<211> 468						
<212> DNA						
<213> Home	o sapiens					
<400> 142	ctctcctggt	actattcact	ctcaacttca	ccatcaccaa	cctgcggtat	60
						120
	tgcagcaccc					
	ggtccctgtt					180
ctgactttgc	tcaggcctga	aaaggatggg	acagccactg	gagtggatgc	catctgcacc	240
caccaccctg	accccaaaag	ccctaggctg	gacagagagc	agctgtattg	ggagctgagc	300
cagctgaccc	acaatatcac	tgagctgggc	cactatgccc	tggacaacga	cagcctcttt	360
gtcaatggtt	tcactcatcg	gagctctgtg	tccaccacca	gcactcctgg	gacccccaca	420
gtgtatctgg	gagcatctaa	gactccagcc	tcgatatttg	gcccttca		468

<210>	143						
<211>	399						
<212>	DNA						
<213>	Homo	sapiens					
<400>	143						
gctgcca	igcc	atctcctgat	actattcacc	ctcaacttca	ccatcactaa	cctgcggtat	60
gaggaga	aca	tgtggcctgg	ctccaggaag	ttcaacacta	cagagagggt	ccttcagggc	120
ctgctaa	iggc	ccttgttcaa	gaacaccagt	gttggccctc	tgtactctgg	ctccaggctg	180
accttgc	tca	ggccagagaa	agatggggaa	gccaccggag	tggatgccat	ctgcacccac	240
cgccctg	acc	ccacaggccc	tgggctggac	agagagcagc	tgtatttgga	gctgagccag	300
ctgaccc	aca	gcatcactga	gctgggcccc	tacacactgg	acagggacag	tctctatgtc	360
aatggtt	tca	cccatcggag	ctctgtaccc	accaccagc			399
(210)	1 4 4						
<210>	144						
<211>	453						
<212>	DNA						
<213>	Homo	sapiens					
		•					
<400>	144						
accgggg	tgg	tcagcgagga	gccattcaca	ctgaacttca	ccatcaacaa	cctgcgctac	60
atggcgg	aca	tgggccaacc	cggctccctc	aagttcaaca	tcacagacaa	cgtcatgaag	120
cacctgo	tca	gtcctttgtt	ccagaggagc	agcctgggtg	cacggtacac	aggctgcagg	180
gtcatcg	cac	taaggtctgt	gaagaacggt	gctgagacac	gggtggacct	cctctgcacc	240
tacctgc	agc	ccctcagcgg	cccaggtctg	cctatcaagc	aggtgttcca	tgagctgagc	300
cagcaga	ccc	atggcatcac	ccggctgggc	ccctactctc	tggacaaaga	cagcctctac	360
cttaacg	gtt	acaatgaacc	tggtctagat	gagcctccta	caactcccaa	gccagccacc	420
acattcc	tgc	ctcctctgtc	agaagccaca	aca			453

<211> 465	
<212> DNA	
<213> Homo sapiens	
<400> 145 gccatggggt accacctgaa gaccctcaca ctcaacttca ccatctccaa tctccagtat 6	50
tcaccagata tgggcaaggg ctcagctaca ttcaactcca ccgagggggt ccttcagcac 12	20
ctgctcagac ccttgttcca gaagagcagc atgggcccct tctacttggg ttgccaactg 18	30
atctccctca ggcctgagaa ggatggggca gccactggtg tggacaccac ctgcacctac 24	10
caccetgace etgtgggeee egggetggae atacageage tttactggga getgagteag 30	0 (
ctgacccatg gtgtcaccca actgggcttc tatgtcctgg acagggatag cctcttcatc 36	30
aatggctatg caccccagaa tttatcaatc cggggcgagt accagataaa tttccacatt 42	0 :
gtcaactgga acctcagtaa tccagacccc acatcctcag agtac 46	5
<210> 146	
<211> 9799	
<212> PRT	
<213> Homo sapiens	
<220>	
<221> VARIANT	
<222> (1)(9799)	
<223> Any "X" = any amino acid	
<400> 146	
Ala Thr Val Pro Phe Met Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15	
Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe 20 25 30	
Asn Ala Thr Glu Arg Glu Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg 35 40 45	
Asn Ser Ser Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu 50 55 60	

Arg Pro Glu Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr 105 Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser Ser Ser Pro Ser Pro Thr Ala Ala Gly Pro 150 155 Leu Leu Met Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr 165 170 Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu 180 185 Ser Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys 215 Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg 265 Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr 280 Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr 290 295 Pro Ser Ser Leu Ser Ser Pro Thr Ile Met Ala Ala Gly Pro Leu Leu 315 Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Gly Glu 325 Asp Met Gly His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val 345 Leu Gln Gly Leu Leu Gly Pro Ile Phe Lys Asn Thr Ser Val Gly Pro 355

Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Ser Glu Lys Asp Gly

370 375 380 Ala Ala Thr Gly Val Asp Ala Ile Cys Ile His His Leu Asp Pro Lys 395 Ser Pro Gly Leu Asn Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu 410 Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Thr Ser Val Pro Thr Ser Ser 440 Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Phe 455 Ser Leu Pro Ser Pro Ala Thr Ala Gly Pro Leu Leu Val Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Thr Leu 505 Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly 515 520 Cys Arg Leu Thr Leu Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly 535 Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu 545 555 Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn 585 Gly Phe Thr His Trp Ile Pro Val Pro Thr Ser Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro 615 620 Thr Ala Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile 625 630 Thr Asn Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys 650 Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe 660 Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu 680

Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys 695 Thr His Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln 745 Thr Ser Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Ser Ala Gly 775 Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln 785 790 795 Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr 810 Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser 825 Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu 855 Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp 885 890 Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr Ser Ala Pro 905 900 Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Ser Ala Gly Pro Leu Leu Val 930 935 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp 950 955 Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu 985 Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asn Gly Ala 995 1000 1005

Ala	Thr 1010	Gly	Met	Asp	Ala	Ile 1015	_	Ser	His	Arg	Leu 1020	-	Pro	Lys
Ser	Pro 1025	Gly	Leu	Asn	Arg	Glu 1030	Gln	Leu	Tyr	Trp	Glu 1035	Leu	Ser	Gln
Leu	Thr 1040	His	Gly	Ile	Lys	Glu 1045		Gly	Pro	Tyr	Thr 1050	Leu	Asp	Arg
Asn	Ser 1055	Leu	Tyr	Val	Asn	Gly 1060	Phe	Thr	His	Arg	Ser 1065	Ser	Val	Ala
Pro	Thr 1070	Ser	Thr	Pro	Gly	Thr 1075		Thr	Val	Asp	Leu 1080	Gly	Thr	Ser
Gly	Thr 1085	Pro	Ser	Ser	Leu	Pro 1090	Ser	Pro	Thr	Thr	Ala 1095	Val	Pro	Leu
Leu	Val 1100	Pro	Phe	Thr	Leu	Asn 1105	Phe	Thr	Ile	Thr	Asn 1110	Leu	Gln	Tyr
Gly	Glu 1115	Asp	Met	Arg	His	Pro 1120	Gly	Ser	Arg	Lys	Phe 1125	Asn	Thr	Thr
Glu	Arg 1130	Val	Leu	Gln	Gly	Leu 1135	Leu	Gly	Pro	Leu	Phe 1140	Lys	Asn	Ser
Ser	Val 1145	Gly	Pro	Leu	Tyr	Ser 1150	Gly	Cys	Arg	Leu	Ile 1155	Ser	Leu	Arg
Ser	Glu 1160	Lys	Asp	Gly	Ala	Ala 1165	Thr	Gly	Val	Asp	Ala 1170	Ile	Cys	Thr
His	His 1175	Leu	Asn	Pro	Gln	Ser 1180	Pro	Gly	Leu	Asp	Arg 1185	Glu	Gln	Leu
Tyr	Trp 1190	Gln	Leu	Ser	Gln	Met 1195	Thr	Asn	Gly	Ile	Lys 1200	Glu	Leu	Gly
Pro	Tyr 1205	Thr	Leu	Asp	Arg	Asn 1210	Ser	Leu	Tyr	Val	Asn 1215	Gly	Phe	Thr
His	Arg 1220	Ser	Ser	Gly	Leu	Thr 1225	Thr	Ser	Thr	Pro	Trp 1230	Thr	Ser	Thr
Val	Asp 1235	Leu	Gly	Thr	Ser	Gly 1240	Thr	Pro	Ser	Pro	Val 1245	Pro	Ser	Pro
Thr	Thr 1250	Ala	Gly	Pro	Leu	Leu 1255	Val	Pro	Phe	Thr	Leu 1260	Asn	Phe	Thr
Ile	Thr 1265	Asn	Leu	Gln	Tyr	Glu 1270	Glu	Asp	Met	His	Arg 1275	Pro	Gly	Ser
Arg	Lys 1280	Phe	Asn	Ala	Thr	Glu 1285	Arg	Val	Leu	Gln	Gly 1290	Leu	Leu	Ser
Pro	Ile	Phe	Lys	Asn	Ser	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys

	1295					1300					1305			
Arg	Leu 1310		Ser	Leu	Arg	Pro 1315		Lys	Asp	Gly	Ala 1320		Thr	Gly
Met	Asp 1325	Ala	Val	Cys	Leu	Tyr 1330		Pro	Asn	Pro	Lys 1335	_	Pro	Gly
Leu	Asp 1340	Arg	Glu	Gln	Leu	Tyr 1345		Glu	Leu	Ser	Gln 1350	Leu	Thr	His
Asn	Ile 1355	Thr	Glu	Leu	Gly	Pro 1360		Ser	Leu	Asp	Arg 1365	Asp	Ser	Leu
Tyr	Val 1370	Asn	Gly	Phe	Thr	His 1375		Asn	Ser	Val	Pro 1380	Thr	Thr	Ser
Thr	Pro 1385	Gly	Thr	Ser	Thr	Val 1390	Tyr	Trp	Ala	Thr	Thr 1395	Gly	Thr	Pro
Ser	Ser 1400	Phe	Pro	Gly	His	Thr 1405	Glu	Pro	Gly	Pro	Leu 1410	Leu	Ile	Pro
Phe	Thr 1415	Phe	Asn	Phe	Thr	Ile 1420	Thr	Asn	Leu	His	Tyr 1425	Glu	Glu	Asn
Met	Gln 1430	His	Pro	Gly	Ser	Arg 1435	Lys	Phe	Asn	Thr	Thr 1440	Glu	Arg	Val
Leu	Gln 1445	Gly	Leu	Leu	Lys	Pro 1450	Leu	Phe	Lys	Asn	Thr 1455	Ser	Val	Gly
Pro	Leu 1460	Tyr	Ser	Gly	Cys	Arg 1465	Leu	Thr	Ser	Leu	Arg 1470	Pro	Glu	Lys
Asp	Gly 1475	Ala	Ala	Thr	Gly	Met 1480	Asp	Ala	Val	Cys	Leu 1485	Tyr	His	Pro
Asn	Pro 1490	Lys	Arg	Pro	Gly	Leu 1495	Asp	Arg	Glu	Gln	Leu 1500	Tyr	Cys	Glu
Leu	Ser 1505	Gln	Leu	Thr	His	Asn 1510	Ile	Thr	Glu	Leu	Gly 1515	Pro	Tyr	Ser
Leu	Asp 1520	Arg	Asp	Ser	Leu	Tyr 1525	Val	Asn	Gly	Phe	Thr 1530	His	Gln	Asn
Ser	Val 1535	Pro	Thr	Thr	Ser	Thr 1540	Pro	Gly	Thr	Ser	Thr 1545	Val	Tyr	Trp
Ala	Thr 1550	Thr	Gly	Thr	Pro	Ser 1555	Ser	Phe	Pro	Gly	His 1560	Thr	Glu	Pro
Gly	Pro 1565	Leu	Leu	Ile	Pro	Phe 1570	Thr	Phe	Asn	Phe	Thr 1575	Ile	Thr	Asn
Leu	His 1580	Tyr	Glu	Glu	Asn	Met 1585	Gln	His	Pro	Gly	Ser 1590	Arg	Lys	Phe

Asn	Thr 1595	Thr	Glu	Arg	Val	Leu 1600		Gly	Leu	Leu	Lys 1605		Leu	Phe
Lys	Asn 1610	Thr	Ser	Val	Gly	Pro 1615		Tyr	Ser	Gly	Cys 1620	_	Leu	Thr
Leu	Leu 1625	Arg	Pro	Glu	Lys	His 1630		Ala	Ala	Thr	Gly 1635		Asp	Thr
Ile	Cys 1640	Thr	His	Arg	Val	Asp 1645		Ile	Gly	Pro	Gly 1650		Asp	Arg
Glu	Arg 1655	Leu	Tyr	Trp	Glu	Leu 1660		Gln	Leu	Thr	Asn 1665	Ser	Ile	Thr
Glu	Leu 1670	Gly	Pro	Tyr	Thr	Leu 1675		Arg	Asp	Ser	Leu 1680		Val	Asn
Gly	Phe 1685	Asn	Pro	Arg	Ser	Ser 1690		Pro	Thr	Thr	Ser 1695		Pro	Gly
Thr	Ser 1700	Thr	Val	His	Leu	Ala 1705	Thr	Ser	Gly	Thr	Pro 1710	Ser	Ser	Leu
Pro	Gly 1715	His	Thr	Ala	Pro	Val 1720	Pro	Leu	Leu	Ile	Pro 1725	Phe	Thr	Leu
Asn	Phe 1730	Thr	Ile	Thr	Asn	Leu 1735	His	Tyr	Glu	Glu	Asn 1740	Met	Gln	His
Pro	Gly 1745	Ser	Arg	Lys	Phe	Asn 1750	Thr	Thr	Glu	Arg	Val 1755	Leu	Gln	Gly
Leu	Leu 1760	Lys	Pro	Leu	Phe	Lys 1765	Asn	Thr	Ser	Val	Gly 1770	Pro	Leu	Tyr
Ser	Gly 1775	Cys	Arg	Leu	Thr	Leu 1780	Leu	Arg	Pro	Glu	Lys 1785	His	Glu	Ala
Ala	Thr 1790	Gly	Val	Asp		Ile 1795		Thr	His	Arg	Val 1800	Asp	Pro	Ile
Gly	Pro 1805	Gly	Leu	Asp	Arg	Glu 1810	Xaa	Leu	Tyr	Trp	Glu 1815	Leu	Ser	Xaa
Leu	Thr 1820	Xaa	Xaa	Ile	Xaa	Glu 1825	Leu	Gly	Pro	Tyr	Xaa 1830	Leu	Asp	Arg
Xaa	Ser 1835	Leu	Tyr	Val	Asn	Gly 1840	Phe	Xaa	Xaa	Xaa	Xaa 1845	Xaa	Xaa	Xaa
Xaa	Thr 1850	Ser	Thr	Pro	Gly	Thr 1855	Ser	Xaa	Val	Xaa	Leu 1860	Xaa	Thr	Ser
Gly	Thr 1865	Pro	Xaa	Xaa	Xaa	Pro 1870	Xaa	Xaa	Thr	Ser	Ala 1875	Gly	Pro	Leu
Leu	Val 1880	Pro	Phe	Thr	Leu	Asn 1885	Phe	Thr	Ile	Thr	Asn 1890	Leu	Gln	Tyr

Glu	Glu 1895		Met	His	His	Pro 1900		Ser	Arg	Lys	Phe 1905		Thr	Thr
Glu	Arg 1910	Val	Leu	Gln	Gly	Leu 1915	Leu	Gly	Pro	Met	Phe 1920	_	Asn	Thr
Ser	Val 1925	_	Leu	Leu	Tyr	Ser 1930	-	Cys	Arg	Leu	Thr 1935		Leu	Arg
Pro	Glu 1940	Lys	Asn	Gly	Ala	Ala 1945	Thr	Gly	Met	Asp	Ala 1950	Ile	Cys	Ser
His	Arg 1955	Leu	Asp	Pro	Lys	Ser 1960	Pro	Gly	Leu	Asp	Arg 1965		Gln	Leu
Tyr	Trp 1970	Glu	Leu	Ser	Gln	Leu 1975	Thr	His	Gly	Ile	Lys 1980	Glu	Leu	Gly
Pro	Tyr 1985	Thr	Leu	Asp	Arg	Asn 1990	Ser	Leu	Tyr	Val	Asn 1995	Gly	Phe	Thr
His	Arg 2000	Ser	Ser	Val	Ala	Pro 2005		Ser	Thr	Pro	Gly 2010	Thr	Ser	Thr
Val	Asp 2015	Leu	Gly	Thr	Ser	Gly 2020	Thr	Pro	Ser	Ser	Leu 2025	Pro	Ser	Pro
Thr	Thr 2030	Ala	Val	Pro	Leu	Leu 2035	Val	Pro	Phe	Thr	Leu 2040	Asn	Phe	Thr
Ile	Thr 2045	Asn	Leu	Gln	Tyr	Gly 2050	Glu	Asp	Met	Arg	His 2055	Pro	Gly	Ser
Arg	Lys 2060	Phe	Asn	Thr	Thr	Glu 2065	Arg	Val	Leu	Gln	Gly 2070	Leu	Leu	Gly
Pro	Leu 2075	Phe	Lys	Asn	Ser	Ser 2080	Val	Gly	Pro	Leu	Tyr 2085	Ser	Gly	Cys
Arg	Leu 2090	Ile	Ser	Leu	Arg	Ser 2095	Glu	Lys	Asp	Gly	Ala 2100	Ala	Thr	Gly
Val	Asp 2105	Ala	Ile	Cys	Thr	His 2110	His	Leu	Asn	Pro	Gln 2115	Ser	Pro	Gly
Leu	Asp 2120	Arg	Glu	Gln	Leu	Tyr 2125	Trp	Gln	Leu	Ser	Gln 2130	Met	Thr	Asn
Gly	Ile 2135	Lys	Glu	Leu	Gly	Pro 2140	Tyr	Thr	Leu	Asp	Arg 2145	Asn	Ser	Leu
Tyr	Val 2150	Asn	Gly	Phe	Thr	His 2155	Arg	Ser	Ser	Gly	Leu 2160	Thr	Thr	Ser
Thr	Pro 2165	Trp	Thr	Ser	Thr	Val 2170	Asp	Leu	Gly	Thr	Ser 2175	Gly	Thr	Pro
Ser	Pro	Val	Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu	Leu	Val	Pro

	2180					2185	ı				2190)		
Phe	Thr 2195	Leu	Asn	Phe	Thr	Ile 2200		Asn	Leu	Gln	Tyr 2205		Glu	Asp
Met	His 2210	Arg	Pro	Gly	Ser	Arg 2215		Phe	Asn	Ala	Thr 2220		Arg	Val
Leu	Gln 2225	Gly	Leu	Leu	Ser	Pro 2230		Phe	Lys	Asn	Ser 2235		Val	Gly
Pro	Leu 2240		Ser	Gly	Cys	Arg 2245		Thr	Ser	Leu	Arg 2250		Glu	Lys
Asp	Gly 2255		Ala	Thr	Gly	Met 2260		Ala	Val	Cys	Leu 2265		His	Pro
Asn	Pro 2270		Arg	Pro	Gly	Leu 2275		Arg	Glu	Gln	Leu 2280		Trp	Glu
Leu	Ser 2285		Leu	Thr	His	Asn 2290	Ile	Thr	Glu	Leu	Gly 2295		Tyr	Ser
Leu	Asp 2300	Arg	Asp	Ser	Leu	Tyr 2305		Asn	Gly	Phe	Thr 2310		Gln	Ser
Ser	Met 2315	Thr	Thr	Thr	Arg	Thr 2320	Pro	Asp	Thr	Ser	Thr 2325		His	Leu
Ala	Thr 2330	Ser	Arg	Thr	Pro	Ala 2335	Ser	Leu	Ser	Gly	Pro 2340	Thr	Thr	Ala
Ser	Pro 2345	Leu	Leu	Val	Leu	Phe 2350	Thr	Ile	Asn	Cys	Thr 2355	Ile	Thr	Asn
Leu	Gln 2360	Tyr	Glu	Glu	Asp	Met 2365	Arg	Arg	Thr	Gly	Ser 2370	Arg	Lys	Phe
Asn	Thr 2375	Met	Glu	Ser	Val	Leu 2380	Gln	Gly	Leu	Leu	Lys 2385	Pro	Leu	Phe
Lys	Asn 2390	Thr	Ser	Val	Gly	Pro 2395	Leu	Tyr	Ser	Gly	Cys 2400	Arg	Leu	Thr
Leu	Leu 2405	Arg	Pro	Lys	Lys	Asp 2410	Gly	Ala	Ala	Thr	Gly 2415	Val	Asp	Ala
Ile	Cys 2420	Thr	His	Arg	Leu	Asp 2425	Pro	Lys	Ser	Pro	Gly 2430	Leu	Asn	Arg
Glu	Gln 2435	Leu	Tyr	Trp	Glu	Leu 2440	Ser	Lys	Leu	Thr	Asn 2445	Asp	Ile	Glu
Glu	Leu 2450	Gly	Pro	Tyr	Thr	Leu 2455	Asp	Arg	Asn	Ser	Leu 2460	Tyr	Val	Asn
Gly	Phe 2465	Thr	His	Gln	Ser	Ser 2470	Val	Ser	Thr	Thr	Ser 2475	Thr	Pro	Gly

Thr	Ser 2480	Thr	Val	Asp	Leu	Arg 2485	Thr	Ser	Gly	Thr	Pro 2490	Ser	Ser	Leu
Ser	Ser 2495	Pro	Thr	Ile	Met	Xaa 2500	Xaa	Xaa	Pro	Leu	Leu 2505	Xaa	Pro	Phe
Thr	Leu 2510	Asn	Phe	Thr	Ile	Thr 2515	Asn	Leu	Xaa	Tyr	Glu 2520	Glu	Xaa	Met
Xaa	Xaa 2525	Pro	Gly	Ser	Arg	Lys 2530		Asn	Thr	Thr	Glu 2535	Arg	Val	Leu
Gln	Gly 2540	Leu	Leu	Arg	Pro	Leu 2545	Phe	Lys	Asn	Thr	Ser 2550	Val	Ser	Ser
Leu	Tyr 2555	Ser	Gly	Cys	Arg	Leu 2560	Thr	Leu	Leu	Arg	Pro 2565	Glu	Lys	Asp
Gly	Ala 2570	Ala	Thr	Arg	Val	Asp 2575	Ala	Ala	Суѕ	Thr	Tyr 2580	Arg	Pro	Asp
Pro	Lys 2585	Ser	Pro	Gly	Leu	Asp 2590	_	Glu	Gln	Leu	Tyr 2595	Trp	Glu	Leu
Ser	Gln 2600	Leu	Thr	His	Ser	Ile 2605	Thr	Glu	Leu	Gly	Pro 2610	Tyr	Thr	Leu
Asp	Arg 2615	Val	Ser	Leu	Tyr	Val 2620	Asn	Gly	Phe	Asn	Pro 2625	Arg	Ser	Ser
Val	Pro 2630	Thr	Thr	Ser	Thr	Pro 2635	Gly	Thr	Ser	Thr	Val 2640	His	Leu	Ala
Thr	Ser 2645	Gly	Thr	Pro	Ser	Ser 2650	Leu	Pro	Gly	His	Thr 2655	Ala	Pro	Val
Pro	Leu 2660	Leu	Ile	Pro		Thr 2665	Leu	Asn	Phe	Thr	Ile 2670	Thr	Asn	Leu
His	Tyr 2675	Glu	Glu	Asn	Met	Gln 2680	His	Pro	Gly	Ser	Arg 2685	Lys	Phe	Asn
Thr	Thr 2690	Glu	Arg	Val	Leu	Gln 2695	Gly	Leu	Leu	Arg	Pro 2700	Leu	Phe	Lys
Ser	Thr 2705	Ser	Val	Gly	Pro	Leu 2710	Tyr	Ser	Gly	Cys	Arg 2715	Leu	Thr	Leu
Leu	Arg 2720	Pro	Glu	Lys	His	Gly 2725	Ala	Ala	Thr	Gly	Val 2730	Asp	Ala	Ile
Cys	Thr 2735	Leu	Arg	Leu	Asp	Pro 2740	Thr	Gly	Pro	Gly	Leu 2745	Asp	Arg	Glu
Arg	Leu 2750	Tyr	Trp	Glu	Leu	Ser 2755	Gln	Leu	Thr	Asn	Ser 2760	Val	Thr	Glu
Leu	Gly 2765	Pro	Tyr	Thr	Leu	Asp 2770	Arg	Asp	Ser	Leu	Tyr 2775	Val	Asn	Gly

Phe	Thr 2780		Arg	Ser	Ser	Val 2785		Thr	Thr	Ser	Ile 2790		Gly	Thr
Ser	Ala 2795	Val	His	Leu	Glu	Thr 2800		Gly	Thr	Pro	Ala 2805		Leu	Pro
Gly	His 2810		Ala	Pro	Gly	Pro 2815		Leu	Val	Pro	Phe 2820		Leu	Asn
Phe	Thr 2825		Thr	Asn	Leu	Gln 2830		Glu	Val	Asp	Met 2835		His	Pro
Gly	Ser 2840	Arg	Lys	Phe	Asn	Thr 2845		Glu	Arg	Val	Leu 2850		Gly	Leu
Leu	Lys 2855	Pro	Leu	Phe	Lys	Ser 2860		Ser	Val	Gly	Pro 2865		Tyr	Ser
Gly	Cys 2870	Arg	Leu	Thr	Leu	Leu 2875	Arg	Pro	Glu	Lys	Arg 2880		Ala	Ala
Thr	Gly 2885	Val	Asp	Thr	Ile	Cys 2890		His	Arg	Leu	Asp 2895		Leu	Asn
Pro	Gly 2900	Leu	Asp	Arg	Glu	Gln 2905	Leu	Tyr	Trp	Glu	Leu 2910	Ser	Lys	Leu
Thr	Arg 2915	Gly	Ile	Ile	Glu	Leu 2920	Gly	Pro	Tyr	Leu	Leu 2925	Asp	Arg	Gly
Ser	Leu 2930	Tyr	Val	Asn	Gly	Phe 2935	Thr	His	Arg	Asn	Phe 2940	Val	Pro	Ile
Thr	Ser 2945	Thr	Pro	Gly	Thr	Ser 2950	Thr	Val	His	Leu	Gly 2955	Thr	Ser	Glu
Thr	Pro 2960	Ser	Ser	Leu	Pro	Arg 2965	Pro	Ile	Val	Pro	Gly 2970	Pro	Leu	Leu
Val	Pro 2975	Phe	Thr	Leu	Asn	Phe 2980	Thr	Ile	Thr	Asn	Leu 2985	Gln	Tyr	Glu
Glu	Ala 2990	Met	Arg	His	Pro	Gly 2995	Ser	Arg	Lys	Phe	Asn 3000	Thr	Thr	Glu
Arg	Val 3005	Leu	Gln	Gly	Leu	Leu 3010	Arg	Pro	Leu	Phe	Lys 3015	Asn	Thr	Ser
Ile	Gly 3020	Pro	Leu	Tyr	Ser	Ser 3025	Cys	Arg	Leu	Thr	Leu 3030	Leu	Arg	Pro
Glu	Lys 3035	Asp	Lys	Ala	Ala	Thr 3040	Arg	Val	Asp	Ala	Ile 3045	Cys	Thr	His
His	Pro 3050	Asp	Pro	Gln	Ser	Pro 3055	Gly	Leu	Asn	Arg	Glu 3060	Gln	Leu	Tyr
Trp	Glu	Leu	Ser	Gln	Leu	Thr	His	Gly	Ile	Thr	Glu	Leu	Gly	Pro

	3065					3070					3075			
Tyr	Thr 3080	Leu	Asp	Arg	Asp	Ser 3085		Tyr	Val	Asp	Gly 3090		Thr	His
Trp	Ser 3095		Ile	Pro	Thr	Thr 3100		Thr	Pro	Gly	Thr 3105		Ile	Val
Asn	Leu 3110		Thr	Ser	Gly	Ile 3115		Pro	Ser	Leu	Pro 3120		Thr	Thr
Xaa	Xaa 3125		Pro	Leu	Leu	Xaa 3130		Phe	Thr	Leu	Asn 3135		Thr	Ile
Thr	Asn 3140	Leu	Xaa	Tyr	Glu	Glu 3145		Met	Xaa	Xaa	Pro 3150		Ser	Arg
Lys	Phe 3155	Asn	Thr	Thr	Glu	Arg 3160		Leu	Gln	Gly	Leu 3165		Lys	Pro
Leu	Phe 3170		Asn	Ser	Ser	Leu 3175		Tyr	Leu	Tyr	Ser 3180	Gly	Cys	Arg
Leu	Ala 3185	Ser	Leu	Arg	Pro	Glu 3190		Asp	Ser	Ser	Ala 3195	Met	Ala	Val
Asp	Ala 3200	Ile	Cys	Thr	His	Arg 3205		Asp	Pro	Glu	Asp 3210	Leu	Gly	Leu
Asp	Arg 3215	Glu	Arg	Leu	Tyr	Trp 3220	Glu	Leu	Ser	Asn	Leu 3225	Thr	Asn	Gly
Ile	Gln 3230	Glu	Leu	Gly	Pro	Tyr 3235	Thr	Leu	Asp	Arg	Asn 3240	Ser	Leu	Tyr
Val	Asn 3245	Gly	Phe	Thr	His	Arg 3250	Ser	Ser	Phe	Leu	Thr 3255	Thr	Ser	Thr
Pro	Trp 3260	Thr	Ser	Thr	Val	Asp 3265	Leu	Gly	Thr	Ser	Gly 3270	Thr	Pro	Ser
Pro	Val 3275	Pro	Ser	Pro	Thr	Thr 3280	Ala	Gly	Pro	Leu	Leu 3285		Pro	Phe
Thr	Leu 3290	Asn	Phe	Thr	Ile	Thr 3295	Asn	Leu	Gln	Tyr	Glu 3300	Glu	Asp	Met
His	Arg 3305	Pro	Gly	Ser	Arg	Arg 3310	Phe	Asn	Thr	Thr	Glu 3315	Arg	Val	Leu
Gln	Gly 3320	Leu	Leu	Thr	Pro	Leu 3325	Phe	Lys	Asn	Thr	Ser 3330	Val	Gly	Pro
Leu	Tyr 3335	Ser	Gly	Cys	Arg	Leu 3340	Thr	Leu	Leu	Arg	Pro 3345	Glu	Lys	Gln
Glu	Ala 3350	Ala	Thr	Gly	Val	Asp 3355	Thr	Ile	Cys	Thr	His 3360	Arg	Val	Asp

Pro	Ile 3365	Gly	Pro	Gly	Leu	Asp 3370	Arg	Glu	Arg	Leu	Tyr 3375	Trp	Glu	Leu
Ser	Gln 3380	Leu	Thr	Asn	Ser	Ile 3385		Glu	Leu	Gly	Pro 3390	Tyr	Thr	Leu
Asp	Arg 3395	Asp	Ser	Leu	Tyr	Val 3400	Asn	Gly	Phe	Asn	Pro 3405	Trp	Ser	Ser
Val	Pro 3410	Thr	Thr	Ser	Thr	Pro 3415	Gly	Thr	Ser	Thr	Val 3420	His	Leu	Ala
Thr	Ser 3425	Gly	Thr	Pro	Ser	Ser 3430	Leu	Pro	Gly	His	Thr 3435	Ala	Pro	Val
Pro	Leu 3440	Leu	Ile	Pro	Phe	Thr 3445	Leu	Asn	Phe	Thr	Ile 3450	Thr	Asp	Leu
His	Tyr 3455	Glu	Glu	Asn	Met	Gln 3460	His	Pro	Gly	Ser	Arg 3465	Lys	Phe	Asn
Thr	Thr 3470	Glu	Arg	Val	Leu	Gln 3475	Gly	Leu	Leu	Lys	Pro 3480	Leu	Phe	Lys
Ser	Thr 3485	Ser	Val	Gly	Pro	Leu 3490	Tyr	Ser	Gly	Cys	Arg 3495	Leu	Thr	Leu
Leu	Arg 3500		Glu	Lys	His	Gly 3505		Ala	Thr	Gly	Val 3510	Asp	Ala	Ile
Cys	Thr 3515	Leu	Arg	Leu	Asp	Pro 3520	Thr	Gly	Pro	Gly	Leu 3525	Asp	Arg	Glu
Arg	Leu 3530	_	Trp	Glu	Leu	Ser 3535	Gln	Leu	Thr	Asn	Ser 3540	Val	Thr	Glu
Leu	Gly 3545		Tyr	Thr	Leu	Asp 3550		Asp	Ser	Leu	Tyr 3555	Val	Asn	Gly
Phe	Thr 3560		_	Ser		2565					Ile 3570	Pro	Gly	Thr
Ser	Ala 3575	Val	His	Leu	Glu	Thr 3580	Ser	Gly	Thr	Pro	Ala 3585	Ser	Leu	Pro
Gly	His 3590		Ala	Pro	Gly	Pro 3595		Leu	Val	Pro	Phe 3600	Thr	Leu	Asn
Phe	Thr 3605	Ile	Thr	Asn	Leu	Gln 3610	Tyr	Glu	Glu	Asp	Met 3615	Arg	His	Pro
Gly	Ser 3620		Lys	Phe	Ser	Thr 3625		Glu	Arg	Val	Leu 3630	Gln	Gly	Leu
Leu	Lys 3635		Leu	Phe	Lys	Asn 3640	Thr	Ser	Val	Ser	Ser 3645	Leu	Tyr	Ser
Gly	Cys 3650		Leu	Thr	Leu	Leu 3655	Arg	Pro	Glu	Lys	Asp 3660	Gly	Ala	Ala

Thr	Arg 3665	Val	Asp	Ala	Val	Cys 3670	Thr	His	Arg	Pro	Asp 3675	Pro	Lys	Ser
Pro	Gly 3680	Leu	Asp	Arg	Glu	Arg 3685	Leu	Tyr	Trp	Lys	Leu 3690	Ser	Gln	Leu
Thr	His 3695	Gly	Ile	Thr	Glu	Leu 3700	Gly	Pro	Tyr	Thr	Leu 3705	Asp	Arg	His
Ser	Leu 3710	Tyr	Val	Asn	Gly	Phe 3715		His	Gln	Ser	Ser 3720	Met	Thr	Thr
Thr	Arg 3725	Thr	Pro	Asp	Thr	Ser 3730	Thr	Met	His	Leu	Ala 3735	Thr	Ser	Arg
Thr	Pro 3740	Ala	Ser	Leu	Ser	Gly 3745	Pro	Thr	Thr	Ala	Ser 3750	Pro	Leu	Leu
Val	Leu 3755	Phe	Thr	Ile	Asn	Phe 3760		Ile	Thr	Asn	Gln 3765	Arg	Tyr	Glu
Glu	Asn 3770	Met	His	His	Pro	Gly 3775	Ser	Arg	Lys	Phe	Asn 3780	Thr	Thr	Glu
Arg	Val 3785		Gln	Gly	Leu	Leu 3790		Pro	Val	Phe	Lys 3795	Asn	Thr	Ser
	3800					3805					Leu 3810			
-	3815					3820					Ile 3825			
	3830					3835					Glu 3840			
	3845					3850					Glu 3855			
-	3860					3865					Gly 3870			
	3875					3880					Thr 3885			
	3890					3895					Pro 3900			
Ala	Pro 3905					3910					Asn 3915			
	Asn 3920					3925					Pro 3930			
	3935					3940					Leu 3945			
Leu	Phe	Lys	Ser	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg

3950			3	955				(3960			
Leu Thr Lo	eu Leu	Arg P	ro G 3	lu 1 970	Lys <i>P</i>	Arg (Gly A	Ala A	Ala 3975	Thr	Gly	Val
Asp Thr I	le Cys	Thr H	is A	rg 1985	Leu i	Asp	Pro 1	Leu i	Asn 3990	Pro	Gly	Leu
Asp Arg G 3995	lu Gln	Leu T	yr T	rp 1000	Glu :	Leu	Ser :	Lys	Leu 4005	Thr	Arg	Gly
Ile Ile G 4010	lu Leu	Gly F	ro T	Tyr 1015	Leu	Leu	Asp	Arg	Gly 4020	Ser	Leu	Tyr
Val Asn G 4025	sly Phe	Thr H	lis A	Arg 4030	Thr	Ser	Val	Pro	Thr 4035	Thr	Ser	Thr
Pro Gly 7	hr Ser	Thr \	/al /	Asp 4045	Leu	Gly	Thr	Ser	Gly 4050	Thr	Pro	Phe
Ser Leu I 4055	Pro Ser	Pro A	Ala :	Xaa 4060	Xaa	Xaa	Pro	Leu	Leu 4065	Xaa	Pro	Phe
Thr Leu A	Asn Phe	Thr	Ile	Thr 4075	Asn	Leu	Xaa	Tyr	Glu 4080	Glu	Xaa	Met
Xaa Xaa 4085				4090					1000			
Gln Thr 4100	Leu Leı	ı Gly	Pro	Met 4105	Phe	Lys	Asn	Thr	Ser 4110	Val	Gly	Leu
Leu Tyr 4115	Ser Gl	y Cys	Arg	Leu 4120	Thr	Leu	Leu	Arg	Ser 4125	Glu	ı Lys	: Asp
Gly Ala 4130	Ala Th	r Gly	Val	Asp 4135	Ala	Ile	Cys	Thr	His 4140	Arg	g Lev	ı Asp
Pro Lys 4145	Ser Pr	o Gly	Val	Asp 4150	Arg	Glu	Gln	Leu	Tyr 4155	Trp	o Glu	ı Leu
Ser Gln 4160	Leu Th	r Asn	Gly	Ile 4165	Lys	Glu	Leu	Gly	Pro 4170	Ту:	r Th:	r Leu
Asp Arg 4175	Asn Se	r Leu	Tyr	Val 4180	Asn)	ı Gly	/ Phe	e Thr	His 418	Tr	p Il	e Pro
Val Pro 4190	Thr Se	er Ser	Thr	Pro 4195	Gl _y 5	/ Thi	s Ser	Thi	2 Val 420	As O	p Le	u Gly
Ser Gly 4205		o Ser	Leu	Pro 421	Sei 0	r Sei	r Pro	o Thi	r Thr 421	Al 5	a Gl	y Pro
Leu Leu 4220		ro Phe	Thr	Leu 422	Ası 5	n Pho	e Thi	r Il	e Thr 423	As O	n Le	u Lys
Tyr Glu 4235		sp Met	His	Cys 424	Pro O	o Gl	y Se	r Ar	g Lys 424	Ph 5	ne As	n Thr

Thr Glu Arg Val Leu Gln Ser Leu Leu Gly Pro Met Phe Lys Asn 4255 4260
Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu 4270 4255 4275
4265 Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys 4290
4280 Thr His Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln 4300 4305
4295 Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu 4310 4300 4300 4300
Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe 4335 4325
Thr His Gln Thr Ser Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser 4350 4340
Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser 4365 4355
Pro Thr Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe Thr Leu Asn Phe 4370 4370 4370 4370
Thr Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa Pro Gly 4395 4385
Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu 4410 4400 The Cor Wal Gly Xaa Leu Tyr Ser Gly
Xaa Pro Xaa Phe Lys Xaa Thr Ser Val Gly Xaa Leu Tyr Ser Gly 4420 4425 Cys Arg Leu Thr Leu Leu Arg Xaa Glu Lys Xaa Xaa Ala Ala Thr 4435
Cys Arg Leu Thr Leu Leu Alg Mas 4440 4435 4440 Xaa Val Asp Xaa Xaa Cys Xaa Xaa Xaa Xaa Asp Pro Xaa Xaa Pro 4450 4450
Xaa Val Asp Xaa Xaa Gys 4455 4445 4450 4455 Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr
4460 Yaa Xaa Tle Xaa Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser
4475 4480 Leu Tyr Val Asn Gly Phe Thr His Trp Ile Pro Val Pro Thr Ser
4490 Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Ser Gly Thr Pro 4510 4515
4505 Ser Ser Leu Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Val Pro 4530 4520 4525
Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys Tyr Glu Glu Asp 4545

Met	His 4550	Cys	Pro	Gly	Ser	Arg 4555	Lys	Phe	Asn	Thr	Thr 4560	Glu	Arg	Val
Leu	Gln 4565	Ser	Leu	Leu	Gly	Pro 4570	Met	Phe	Lys	Asn	Thr 4575	Ser	Val	Gly
Pro	Leu 4580	Tyr	Ser	Gly	Cys	Arg 4585	Leu	Thr	Ser	Leu	Arg 4590	Ser	Glu	Lys
Asp	Gly 4595	Ala	Ala	Thr	Gly	Val 4600	Asp	Ala	Ile	Cys	Thr 4605	His	Arg	Val
Asp	Pro 4610	Lys	Ser	Pro	Gly	Val 4615	Asp	Arg	Glu	Gln	Leu 4620	Tyr	Trp	Glu
Leu	Ser 4625	Gln	Leu	Thr	Asn	Gly 4630	Ile	Lys	Glu	Leu	Gly 4635	Pro	Tyr	Thr
Leu	Asp 4640	Arg	Asn	Ser	Leu	Tyr 4645	Val	Asn	Gly	Phe	Thr 4650	His	Gln	Thr
Ser	Ala 4655	Pro	Asn	Thr	Ser	Thr 4660	Pro	Gly	Thr	Ser	Thr 4665	Val	Asp	Leu
_	4670					4675					Pro 4680			
	4685					4690					Thr 4695			
Leu	Gln 4700					4705					Ser 4710			
	Thr 4715					4720					Gly 4725			
_	4730					4735					Cys 4740			
	4745					4750								
	4760					4765					Gly 4770			
	4775					4780					Xaa 4785			
	4790					4795					Leu 4800			
	4805					4810					Ser 4815			
	4820					4825					Pro 4830			
Pro	Xaa	Xaa	Thr	Xaa	Xaa	Xaa	Pro	Leu	Leu	хаа	Pro	rne	ınr	ьeu

	4835					4840					4845			
Asn	Phe 4850	Thr	Ile	Thr	Asn	Leu 4855	Xaa	Tyr	Glu	Glu	Xaa 4860	Met	Xaa	Xaa
Pro	Gly 4865	Ser	Arg	Lys	Phe	Asn 4870	Thr	Thr	Glu	Arg	Val 4875	Leu	Gln	Gly
Leu	Leu 4880	Lys	Pro	Leu	Phe	Arg 4885	Asn	Ser	Ser	Leu	Glu 4890	Tyr	Leu	Tyr
Ser	Gly 4895		Arg	Leu	Ala	Ser 4900	Leu	Arg	Pro	Glu	Lys 4905	Asp	Ser	Ser
Ala	Met 4910		Val	Asp	Ala	Ile 4915	Cys	Thr	His	Arg	Pro 4920	Asp	Pro	Glu
Asp	Leu 4925		Leu	Asp	Arg	Glu 4930	Arg	Leu	Tyr	Trp	Glu 4935	Leu	Ser	Asn
Leu	Thr 4940		Gly	lle	Gln	Glu 4945	Leu	Gly	Pro	Tyr	Thr 4950	Leu	Asp	Arg
Asn	Ser 4955		ı Tyr	Val	Asn	Gly 4960	Phe	Thr	His	Arg	Ser 4965	Ser	Met	Pro
Thr	Thr 4970		Thr	Pro	Gly	Thr 4975	Ser	Thr	Val	Asp	Val 4980	Gly	Thr	Ser
Gly	Thr 4985		Ser	s Ser	Ser	Pro 4990	Ser	Pro	Thr	Thr	Ala 4995	Gly	Pro	Leu
Leu	lle 5000		o Phe	e Thr	Leu	Asn 5005	Phe	Thr	Ile	Thr	Asn 5010	Leu	Gln	Tyr
Gly	/ Glu 501		o Met	t Gly	His	Pro 5020	Gly	Ser	Arg	Lys	Phe 5025	Asn	Thr	Thr
Glu	a Arg 503		l Le	u Gln	Gly	Leu 5035	Leu	Gly	y Pro	. Il∈	Phe 5040	Lys	. Asr	Thr
Sei	r Val 504		y Pr	o Lev	туг	Ser 5050	Gly	, Cys	s Arç	g Leu	Thr 5055	Ser	: Leu	a Arg
Se	r Glu 506		s As	p Gly	/ Ala	a Ala 506	Thi 5	Gly	y Val	L Asp	5070	Ile	e Cys	s Ile
Hi	s His 507		u As	p Pro	o Ly:	s Ser 508	Pro	o Gl	y Lei	וAS ג	n Arg 5085	Glu 5	ı Ard	g Leu
Ту	r Trp 509		u Le	eu Se:	r Gli	n Leu 509	Th: 5	r As	n Gly	y Il	e Lys 5100	Gl:	u Le	u Gly
Pr	o Tyr 510		ır L∈	eu Asj	p Ar	g Asn 511	. Se:	r Le	u Ty	r Va	l Asn 511	Gl _: 5	y Ph	e Thr
Hi	s Arg 512	ј Т1 20	nr Se	er Va	l Pr	o Thr 512	Th:	r Se	r Th	r Pr	o Gly 513	Th O	r Se	r Thr

Va	l Asp 5135		Gly	Thr	Ser	Gly 5140		Pro	Phe	Ser	Leu 5145	Pro	Ser	Pro
Al	a Thr 5150		Gly	Pro	Leu	Leu 5155	Val	Leu	Phe	Thr	Leu 5160	Asn	Phe	Thr
Il	e Thr 5165		Leu	Lys	Tyr	Glu 5170		Asp	Met	His	Arg 5175	Pro	Gly	Ser
Ar	g Lys 5180		Asn	Thr	Thr	Glu 5185	_	Val	Leu	Gln	Thr 5190	Leu	Leu	Gly
Pr	o Met 5195	Phe	Lys	Asn	Thr	Ser 5200	Val	Gly	Leu	Leu	Tyr 5205	Ser	Gly	Cys
Ar	g Leu 5210		Leu	Leu	Arg	Ser 5215		Lys			Ala 5220	Ala	Thr	Gly
Va	1 Asp 5225		Ile	Cys	Thr	His 5230	Arg	Leu	Asp	Pro	Lys 5235	Ser	Pro	Gly
Le	u Asp 5240	_	Glu	Xaa	Leu	Tyr 5245	Trp	Glu	Leu	Ser	Xaa 5250	Leu	Thr	Xaa
Хa	a Ile 5255	Xaa	Glu	Leu	Gly	Pro 5260	Tyr	Xaa	Leu	Asp	Arg 5265	Xaa	Ser	Leu
Ту	r Val 5270	Asn	Gly	Phe	Xaa	Xaa 5275	Xaa	Xaa	Xaa	Xaa	Xaa 5280	Xaa	Thr	Ser
Th	r Pro 5285	_	Thr	Ser	Xaa	Val 5290	Xaa	Leu	Xaa	Thr	Ser 5295	Gly	Thr	Pro
Ха	a Xaa 5300	Xaa	Pro	Xaa	Xaa	Thr 5305	Xaa	Xaa	Xaa	Pro	Leu 5310	Leu	Xaa	Pro
Ph	e Thr 5315		Asn	Phe	Thr	Ile 5320	Thr	Asn	Leu	Xaa	Tyr 5325	Glu	Glu	Xaa
Ме	t Xaa 5330	Xaa	Pro	Gly	Ser	Arg 5335	Lys	Phe	Asn	Thr	Thr 5340	Glu	Arg	Val
Le	u Gln 5345		Leu	Leu	Arg	Pro 5350	Val	Phe	Lys	Asn	Thr 5355	Ser	Val	Gly
Pr	o Leu 5360	-	Ser	Gly	Cys	Arg 5365	Leu	Thr	Leu	Leu	Arg 5370	Pro	Lys	Lys
As	p Gly 5375	Ala	Ala	Thr	Lys	Val 5380	Asp	Ala	Ile	Cys	Thr 5385	Tyr	Arg	Pro
As	p Pro 5390		Ser	Pro	Gly	Leu 5395	Asp	Arg	Glu	Gln	Leu 5400	Tyr	Trp	Glu
Le	u Ser 5405	Gln	Leu	Thr	His	Ser 5410	Ile	Thr	Glu	Leu	Gly 5415	Pro	Tyr	Thr
Gl	n Asp 5420	Arg	Asp	Ser	Leu	Tyr 5425	Val	Asn	Gly	Phe	Thr 5430	His	Arg	Ser

Ser	Val 5435	Pro	Thr	Thr	Ser	Ile 5440	Pro	Gly	Thr	Ser	Ala 5445	Val	His	Leu
Glu	Thr 5450	Thr	Gly	Thr	Pro	Ser 5455	Ser	Phe	Pro	Gly	His 5460	Thr	Glu	Pro
Gly	Pro 5465	Leu	Leu	Ile	Pro	Phe 5470	Thr	Phe	Asn	Phe	Thr 5475	Ile	Thr	Asn
Leu	Arg 5480	Tyr	Glu	Glu	Asn	Met 5485		His	Pro	Gly	Ser 5490	Arg	Lys	Phe
Asn	Thr 5495	Thr	Glu	Arg	Val	Leu 5500	Gln	Gly	Leu	Leu	Thr 5505	Pro	Leu	Phe
Lys	Asn 5510	Thr	Ser	Val	Gly	Pro 5515	Leu	Tyr	Ser	Gly	Cys 5520	Arg	Leu	Thr
Leu	Leu 5525	Arg	Pro	Glu	Lys	Gln 5530	Glu	Ala	Ala	Thr	Gly 5535	Val	Asp	Thr
Ile	Cys 5540	Thr	His	Arg	Val	Asp 5545	Pro	Ile	Gly	Pro	Gly 5550	Leu	Asp	Arg
Glu	Arg 5555	Leu	Tyr	Trp		Leu 5560	Ser	Gln	Leu	Thr	Asn 5565	Ser	Ile	Thr
Glu	Leu 5570	Gly	Pro	Tyr	Thr	Leu 5575	Asp	Arg	Asp	Ser	Leu 5580	Tyr	Val	Asp
Gly	Phe 5585	Asn	Pro	Trp	Ser	Ser 5590	Val	Pro	Thr	Thr	Ser 5595	Thr	Pro	Gly
Thr	Ser 5600	Thr	Val	His		Ala 5605		Ser	Gly	Thr	Pro 5610	Ser	Pro	Leu
Pro	Gly 5615	His	Thr	Ala	Pro	Val 5620	Pro	Leu	Leu	Ile	Pro 5625	Phe	Thr	Leu
	Phe 5630		Ile			Leu 5635							Gln	His
Pro	Gly 5645	Ser	Arg	Lys	Phe	Asn 5650		Thr	Glu	Arg	Val 5655	Leu	Gln	Gly
Leu	Leu 5660	Lys	Pro	Leu	Phe	Lys 5665	Ser	Thr	Ser	Val	Gly 5670	Pro	Leu	Tyr
Ser	Gly 5675	Cys	Arg	Leu	Thr	Leu 5680	Leu	Arg	Pro	Glu	Lys 5685	His	Gly	Ala
Ala	Thr 5690	Gly	Val	Asp	Ala	Ile 5695		Thr	Leu	Arg	Leu 5700		Pro	Thr
Gly	Pro 5705	Gly	Leu	Asp	Arg	Glu 5710	Arg	Leu	Tyr	Trp	Glu 5715	Leu	Ser	Gln
Leu	Thr	Asn	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg

	5720					5725					5730			
Asp		Leu	Tyr	Val	Asn	Gly 5740	Phe	Asn	Pro	Trp	Ser 5745	Ser	Val	Pro
Thr	Thr 5750	Ser	Thr	Pro	Gly	Thr 5755	Ser	Thr	Val	His	Leu 5760	Ala	Thr	Ser
Gly	Thr 5765	Pro	Ser	Ser	Leu	Pro 5770	Gly	His	Thr	Thr	Ala 5775	Gly	Pro	Leu
Leu	Val 5780	Pro	Phe	Thr	Leu	Asn 5785	Phe	Thr	Ile	Thr	Asn 5790	Leu	Lys	Tyr
Glu	Glu 5795	Asp	Met	His	Cys	Pro 5800	Gly	Ser	Arg	Lys	Phe 5805	Asn	Thr	Thr
Glu	Arg 5810		Leu	Gln	Ser	Leu 5815	His	Gly	Pro	Met	Phe 5820	Lys	Asn	Thr
Ser	Val 5825		Pro	Leu	Tyr	Ser 5830	Gly	Cys	Arg	Leu	Thr 5835	Leu	Leu	Arg
Ser	Glu 5840		Asp	Gly	Ala	Ala 5845	Thr	Gly	Val	Asp	Ala 5850	Ile	Cys	Thr
His	Arg 5855		Asp	Pro	Lys	Ser 5860	Pro	Gly	Leu	Asp	Arg 5865	Glu	Xaa	Leu
Tyr	Trp 5870		Leu	Ser	Xaa	Leu 5875		Xaa	Xaa	Ile	Xaa 5880	Glu	Leu	Gly
Pro	Tyr 5885		Leu	Asp	Arg	Xaa 5890	Ser	Leu	Tyr	Val	Asn 5895	Gly	Phe	Xaa
Xaa	Xaa 5900		Xaa	Xaa	Xaa	Xaa 5905	Thr	Ser	Thr	Pro	Gly 5910	Thr	Ser	Xaa
Val	Xaa 5915		Xaa	Thr	Ser	Gly 5920	Thr	Pro	Xaa	Xaa	Xaa 5925	Pro	Xaa	Xaa
Thr	Xaa 5930		Xaa	Pro	Leu	Leu 5935		Pro	Phe	Thr	Leu 5940	Asn	Phe	Thr
Ile	Thr 5945		Leu	ı Xaa	Tyr	Glu 5950	Glu	Xaa	Met	Xaa	Xaa 5955	Pro	Gly	Ser
Aro	J Lys 5960		a Asr	Thr	Thr	Glu 5965	Arg	Val	Leu	Gln	Gly 5970	Leu)	ı Leu	ı Xaa
Pro	597!		e Lys	s Xaa	Thr	Ser 5980		Gly	. Xaa	Leu	Tyr 5985	Ser	Gly	, Cys
Arg	g Leu 5990		Lei	ı Lev	a Arg	y Xaa 5995		Lys	Хаа	Xaa	Ala 6000	Ala	a Thr	: Xaa
Val	1 Asp 600		a Xaa	a Cys	s Xaa	6010		Xaa	Asp	Pro	0 Xaa 6015	Xaa	a Pro	Gly

Leu	Asp 6020	Arg	Glu	Xaa	Leu	Tyr 6025	Trp	Glu	Leu	Ser	Xaa 6030	Leu	Thr	Asn
Ser	Ile	Thr	Glu	Leu	Gly		Tyr	Thr	Leu	Asp	Arg 6045	Asp	Ser	Leu
Tyr		Asn	Gly	Phe	Thr		Arg	Ser	Ser		Pro 6060	Thr	Thr	Ser
Ile		Gly	Thr	Ser	Ala	Val	His	Leu	Glu	Thr	Ser 6075	Gly	Thr	Pro
Ala		Leu	Pro	Gly	His		Ala	Pro	Gly	Pro	Leu 6090	Leu	Val	Pro
Phe			Asn	Phe			Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp
Met	6095 Arg		Pro	Gly				Phe	Asn	Thr	6105 Thr	Glu	Arg	Val
Leu	6110 Gln		Leu	Leu	Lys	6115 Pro		Phe	Lys	Ser	6120 Thr		Val	Gly
Dro	6125	Тик	Ser	Gly	Cvs	6130	T.eu	Thr	Leu	Leu	6135 Arg	Pro	Glu	Lys
	6140					6145					6150			
Arg	Gly 6155		Ala	Thr	Gly	Val 6160		Thr	Ile	Cys	Thr 6165	His	Arg	Leu
Asp	Pro 6170		Asn	Pro	Gly	Leu 6175		Arg	Glu	Xaa	Leu 6180	Tyr	Trp	Glu
Leu	Ser 6185		Leu	Thr		Xaa 6190		Xaa	Glu	Leu	Gly 6195	Pro	Tyr	Xaa
Leu	Asp 6200		Xaa	Ser	Leu	Tyr 6205		Asn	Gly	Phe	Xaa 6210	Xaa	Xaa	Xaa
	Xaa 6215		Xaa	Thr	Ser	Thr 6220	Pro	Gly	Thr	Ser	Xaa 6225	Val	Xaa	Leu
Xaa	Thr 6230		Gly	Thr	Pro	Xaa 6235		Xaa	Pro	Xaa	Xaa 6240		Xaa	Xaa
Xaa	Pro 6245		Leu	. Xaa	Pro	Phe 6250		Leu	Asn	Phe	Thr 6255		Thr	Asn
Leu	Xaa 6260		Glu	ı Glu	Xaa	Met 6265		Xaa	Pro	Gly	Ser 6270	Arg	Lys	Phe
Asn	Thr 6275		Glu	ı Arg	Val	Leu 6280		Gly	Leu	Leu	Xaa 6285	Pro	Хаа	Phe
Lys	Xaa 6290		Ser	· Val	Gly	Xaa 6295		Tyr	Ser	Gly	Cys 6300	Arg	Leu	Thr
Leu	Leu 6305		g Xaa	a Glu	Lys	Xaa 6310		Ala	a Ala	Thr	Xaa 6315	Val	Asp	Xaa

Xaa	Cys 6320	Xaa	Xaa	Xaa	Xaa	Asp 6325	Pro	Xaa	Xaa	Pro	Gly 6330	Leu	Asp	Arg
Glu	Xaa 6335	Leu	Tyr	Trp	Glu	Leu 6340	Ser	Xaa	Leu	Thr	Xaa 6345	Xaa	Ile	Xaa
Glu	Leu 6350	Gly	Pro	Tyr	Xaa	Leu 6355		Arg	Xaa	Ser	Leu 6360	Tyr	Val	Asn
Gly	Phe 6365	His	Pro	Arg	Ser	Ser 6370		Pro	Thr	Thr	Ser 6375		Pro	Gly
Thr	Ser 6380	Thr	Val	His	Leu	Ala 6385	Thr	Ser	Gly	Thr	Pro 6390	Ser	Ser	Leu
Pro	Gly 6395	His	Thr	Ala		Val 6400	Pro	Leu	Leu	Ile	Pro 6405	Phe	Thr	Leu
Asn	Phe 6410	Thr	Ile	Thr	Asn	Leu 6415	His	Tyr	Glu	Glu	Asn 6420	Met	Gln	His
Pro	Gly 6425	Ser	Arg	Lys	Phe	Asn 6430	Thr	Thr	Glu	Arg	Val 6435	Leu	Gln	Gly
Leu	Leu 6440	Gly	Pro	Met		Lys 6445	Asn	Thr	Ser	Val	Gly 6450	Leu	Leu	Tyr
Ser	Gly 6455	Cys	Arg	Leu	Thr	Leu 6460	Leu	Arg	Pro	Glu	Lys 6465	Asn	Gly	Ala
Ala	Thr 6470	Gly	Met	Asp	Ala	Ile 6475	Cys	Ser	His	Arg	Leu 6480	Asp	Pro	Lys
Ser	Pro 6485	Gly	Leu	Asp	Arg	Glu 6490	Xaa	Leu	Tyr	Trp	Glu 6495	Leu	Ser	Xaa
Leu	Thr 6500	Xaa	Xaa	Ile	Xaa	Glu 6505	Leu	Gly	Pro	Tyr	Xaa 6510	Leu	Asp	Arg
Xaa	Ser 6515	Leu	Tyr	Val	Asn	Gly 6520	Phe	Xaa	Xaa	Xaa	Xaa 6525	Xaa	Xaa	Xaa
Xaa	Thr 6530	Ser	Thr	Pro	Gly	Thr 6535	Ser	Xaa	Val	Xaa	Leu 6540	Xaa	Thr	Ser
Gly	Thr 6545	Pro	Xaa	Xaa	Xaa	Pro 6550	Xaa	Xaa	Thr	Xaa	Xaa 6555	Xaa	Pro	Leu
Leu	Xaa 6560	Pro	Phe	Thr	Leu	Asn 6565	Phe	Thr	Ile	Thr	Asn 6570	Leu	Xaa	Tyr
Glu	Glu 6575	Xaa	Met	Xaa	Xaa	Pro 6580	Gly	Ser	Arg	Lys	Phe 6585	Asn	Thr	Thr
Glu	Arg 6590	Val	Leu	Gln	Gly	Leu 6595	Leu	Xaa	Pro	Xaa	Phe 6600	Lys	Xaa	Thr
Ser	Val	Gly	Xaa	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg

	6605					6610					6615			
Xaa	Glu 6620		Xaa	Xaa	Ala	Ala 6625		Xaa	Val	Asp	Xaa 6630		Cys	Xaa
Xaa	Xaa 6635		Asp	Pro	Xaa	Xaa 6640		Gly	Leu	Asp	Arg 6645		Xaa	Leu
Tyr	Trp 6650		Leu	Ser	Xaa	Leu 6655		Xaa	Xaa	Ile	Xaa 6660		Leu	Gly
Pro	Tyr 6665	Xaa	Leu	Asp	Arg	Xaa 6670		Leu	Tyr	Val	Asn 6675	_	Phe	Thr
His	Gln 6680		Ser	Val	Pro	Thr 6685		Ser	Thr	Pro	Gly 6690		Ser	Thr
Val	Tyr 6695	Trp	Ala	Thr	Thr	Gly 6700		Pro	Ser	Ser	Phe 6705		Gly	His
Thr	Glu 6710	Pro	Gly	Pro	Leu	Leu 6715		Pro	Phe	Thr	Phe 6720		Phe	Thr
Ile	Thr 6725	Asn	Leu	His	Tyr	Glu 6730		Asn	Met	Gln	His 6735	Pro	Gly	Ser
Arg	Lys 6740	Phe	Asn	Thr	Thr	Glu 6745	Arg	Val	Leu	Gln	Gly 6750	Leu	Leu	Thr
Pro	Leu 6755	Phe	Lys	Asn	Thr	Ser 6760	Val	Gly	Pro	Leu	Tyr 6765	Ser	Gly	Cys
Arg	Leu 6770	Thr	Leu	Leu	Arg	Pro 6775	Glu	Lys	Gln	Glu	Ala 6780	Ala	Thr	Gly
Val	Asp 6785	Thr	Ile	Cys	Thr	His 6790	Arg	Val	Asp	Pro	Ile 6795	Gly	Pro	Gly
Leu	Asp 6800	Arg	Glu	Xaa	Leu	Tyr 6805	Trp	Glu	Leu	Ser	Xaa 6810	Leu	Thr	Xaa
Xaa	Ile 6815	Xaa	Glu	Leu	Gly	Pro 6820	Tyr	Xaa	Leu	Asp	Arg 6825	Xaa	Ser	Leu
Tyr	Val 6830	Asn	Gly	Phe	Xaa	Xaa 6835	Xaa	Xaa	Xaa	Xaa	Xaa 6840	Xaa	Thr	Ser
Thr	Pro 6845	Gly	Thr	Ser	Xaa	Val 6850	Xaa	Leu	Xaa	Thr	Ser 6855	Gly	Thr	Pro
Xaa	Xaa 6860	Xaa	Pro	Xaa	Xaa	Thr 6865	Xaa	Xaa	Xaa	Pro	Leu 6870	Leu	Xaa	Pro
Phe	Thr 6875	Leu	Asn	Phe	Thr	Ile 6880	Thr	Asn	Leu	Xaa	Tyr 6885	Glu	Glu	Xaa
Met	Xaa 6890	Xaa	Pro	Gly	Ser	Arg 6895	Lys	Phe	Asn	Thr	Thr 6900	Glu	Arg	Val

Leu	Gln 6905		Leu	Leu	Xaa	Pro 6910		Phe	Lys	Xaa	Thr 6915		Val	Gly
Xaa	Leu 6920		Ser	Gly	Cys	Arg 6925		Thr	Leu	Leu	Arg 6930		Glu	Lys
Xaa	Xaa 6935		Ala	Thr	Xaa	Val 6940		Xaa	Xaa	Суѕ	Xaa 6945		Xaa	Xaa
Asp	Pro 6950		Xaa	Pro	Gly	Leu 6955		Arg	Glu	Xaa	Leu 6960		Trp	Glu
Leu	Ser 6965	Xaa	Leu	Thr	Xaa	Xaa 6970		Xaa	Glu	Leu	Gly 6975		Tyr	Xaa
Leu	Asp 6980		Xaa	Ser	Leu	Tyr 6985		Asn	Gly	Phe	Thr 6990		Arg	Ser
Ser	Val 6995	Pro	Thr	Thr	Ser	Ser 7000	Pro	Gly	Thr	Ser	Thr 7005		His	Leu
Ala	Thr 7010	Ser	Gly	Thr	Pro	Ser 7015	Ser	Leu	Pro	Gly	His 7020		Ala	Pro
Val	Pro 7025	Leu	Leu	Ile	Pro	Phe 7030	Thr	Leu	Asn	Phe	Thr 7035	Ile	Thr	Asn
Leu	His 7040	Tyr	Glu	Glu	Asn	Met 7045	Gln	His	Pro	Gly	Ser 7050	Arg	Lys	Phe
Asn	Thr 7055	Thr	Glu	Arg	Val	Leu 7060	Gln	Gly	Leu	Leu	Lys 7065		Leu	Phe
Lys	Ser 7070	Thr	Ser	Val	Gly	Pro 7075	Leu	Tyr	Ser	Gly	Cys 7080	Arg	Leu	Thr
Leu	Leu 7085	Arg	Pro	Glu	Lys	His 7090	Gly	Ala	Ala	Thr	Gly 7095	Val	Asp	Ala
Ile	Cys 7100	Thr	Leu	Arg	Leu	Asp 7105	Pro	Thr	Gly	Pro	Gly 7110	Leu	Asp	Arg
Glu	Xaa 7115	Leu	Tyr	Trp	Glu	Leu 7120	Ser	Xaa	Leu	Thr	Xaa 7125	Xaa	Ile	Xaa
Glu	Leu 7130	Gly	Pro	Tyr	Xaa	Leu 7135	Asp	Arg	Xaa	Ser	Leu 7140	Tyr	Val	Asn
Gly	Phe 7145	Xaa	Xaa	Xaa	Xaa	Xaa 7150	Xaa	Xaa	Xaa	Thr	Ser 7155	Thr	Pro	Gly
Thr	Ser 7160	Xaa	Val	Xaa	Leu	Xaa 7165	Thr	Ser	Gly	Thr	Pro 7170	Xaa	Xaa	Xaa
Pro	Xaa 7175	Xaa	Thr	Xaa	Xaa	Xaa 7180	Pro	Leu	Leu	Xaa	Pro 7185	Phe	Thr	Leu
Asn	Phe 7190	Thr	Ile	Thr	Asn	Leu 7195	Xaa	Tyr	Glu	Glu	Xaa 7200	Met	Xaa	Xaa

Pro	Gly 720	Se:	r Ar	g Lys	s Phe	e Asn 7210	Thr	Thr	Glu	a Arç	y Val 721		ı Gli	n Gly
Leu	Leu 7220	Xaa	a Pro	o Xaa	a Phe	e Lys 7225	Xaa	Thr	Ser	. Val	. Gly 7230		a Lei	ı Tyr
Ser	Gly 7235	Суз	s Arg	g Leu	ı Thr	Leu 7240	Leu)	Arg	, Xaa	Glu	Lys 7245		a Xaa	a Ala
Ala	Thr 7250	Xaa	a Val	Asp) Xaa	Xaa 7255		Xaa	Xaa	Xaa	Xaa 7260		Pro) Xaa
Xaa	Pro 7265	Gly	/ Leu	ı Asp	Arg	Glu 7270		Leu	Tyr	Trp	Glu 7275		ı Ser	Xaa
Leu	Thr 7280	Хаа	Хаа	Ile	. Xaa	Glu 7285		Gly	Pro	Tyr	Xaa 7290		Asp	Arg
Xaa	Ser 7295	Leu	Tyr	Val	Asn	Gly 7300	Phe	Thr	His	Arg	Thr 7305		. Val	Pro
Thr	Thr 7310	Ser	Thr	Pro	Gly	Thr 7315	Ser	Thr	Val	His	Leu 7320		Thr	Ser
Gly	Thr 7325	Pro	Ser	Ser	Leu	Pro 7330		His	Thr	Ala	Pro 7335		Pro	Leu
Leu	Ile 7340	Pro	Phe	Thr	Leu	Asn 7345	Phe	Thr	Ile	Thr	Asn 7350		Gln	Tyr
Glu	Glu 7355	Asp	Met	His	Arg	Pro 7360	Gly	Ser	Arg	Lys	Phe 7365	Asn	Thr	Thr
Glu	Arg 7370	Val	Leu	Gln	Gly	Leu 7375	Leu	Ser	Pro	Ile	Phe 7380	Lys	Asn	Ser
Ser	Val 7385	Gly	Pro	Leu	Tyr	Ser 7390	Gly	Cys	Arg	Leu	Thr 7395	Ser	Leu	Arg
Pro	Glu 7400	Lys	Asp	Gly	Ala	Ala 7405	Thr	Gly	Met	Asp	Ala 7410	Val	Cys	Leu
Tyr	His 7415	Pro	Asn	Pro	Lys	Arg 7420	Pro	Gly	Leu	Asp	Arg 7425	Glu	Gln	Leu
Tyr	Cys 7430	Glu	Leu	Ser	Gln	Leu 7435	Thr	His	Asn	Ile	Thr 7440	Glu	Leu	Gly
Pro	Tyr 7445	Ser	Leu	Asp	Arg	Asp 7450	Ser	Leu	Tyr		Asn 7455	Gly	Phe	Thr
His	Gln 7460	Asn	Ser	Val	Pro	Thr 7465	Thr	Ser	Thr		Gly 7470	Thr	Ser	Thr
Val	Tyr 7475	Trp	Ala	Thr	Thr	Gly 7480	Thr	Pro	Ser		Phe 7485	Pro	Gly	His
Thr	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro	Phe	Thr	Leu	Asn	Phe	Thr

	7490	0				749	5				750	0		
Ile	Thr 750	Ası ō	n Lei	u Xaa	а Ту	r Glu 751	Gl:	ı Xaa	a Met	t Xaa	3 Xaa 751		o Gl	y Ser
Arg	Lys 7520	Phe	e Ası	n Thi	Thi	r Glu 752	Arq 5	g Val	l Le	ı Glr	n Gly 753		u Le	u Xaa
Pro	Xaa 7535	Ph€	∋ Lys	s Xaa	Thi	Ser 754(Va]	Gly	y Xaa	a Leu	Tyr 754		r Gl	y Cys
Arg	Leu 7550	Thr	: Let	ı Leu	a Arç	7555	Glu S	Lys	s Xaa	а Хаа	Ala 7560		a Th:	r Xaa
Val	Asp 7565	Xaa	a Xaa	a Cys	Хаа	Xaa 7570	Xaa)	Xaa	a Asp	Pro	Xaa 7575	Xaa	a Pro	o Gly
Leu	Asp 7580	Arg	g Glu	xaa	Leu	Tyr 7585	Trp	Glu	Leu	Ser	Xaa 7590	Let	ı Thi	. Xaa
Xaa	Ile 7595	Xaa	Glu	Leu	Gly	Pro 7600	Tyr	Xaa	Leu	Asp	Arg 7605		Ser	Leu
Tyr	Val 7610	Asn	Gly	Phe	Thr	His 7615	Trp	Ser	Ser	Gly	Leu 7620		Thr	Ser
	Pro 7625	Trp	Thr	Ser	Thr	Val 7630	Asp	Leu	Gly	Thr	Ser 7635		Thr	Pro
Ser	Pro 7640	Val	Pro	Ser	Pro	Thr 7645	Thr	Ala	Gly	Pro	Leu 7650		Val	Pro
Phe	Thr 7655	Leu	Asn	Phe	Thr	Ile 7660	Thr	Asn	Leu	Gln	Tyr 7665	Glu	Glu	Asp
Met	His 7670	Arg	Pro	Gly	Ser	Arg 7675	Lys	Phe	Asn	Ala	Thr 7680	Glu	Arg	Val
Leu	Gln 7685	Gly	Leu	Leu	Ser	Pro 7690	Ile	Phe	Lys	Asn	Thr 7695	Ser	Val	Gly
Pro :	Leu 7700	Tyr	Ser	Gly	Cys	Arg 7705	Leu	Thr	Leu	Leu	Arg 7710	Pro	Glu	Lys
Gln (Glu 77 1 5	Ala	Ala	Thr	Gly	Val 7720	Asp	Thr	Ile		Thr 7725	His	Arg	Val
Asp I	Pro 7730	Ile	Gly	Pro	Gly	Leu 7735	Asp	Arg	Glu		Leu 7740	Tyr	Trp	Glu
Leu S	Ser 7745	Xaa	Leu	Thr	Xaa	Xaa 7750	Ile	Xaa	Glu		Gly 7755	Pro	Tyr	Xaa
Leu A	Asp 7760	Arg	Xaa	Ser	Leu	Tyr 7765	Val	Asn	Gly		Xaa 7770	Xaa	Xaa	Xaa
Xaa X	Kaa 1775	Xaa	Xaa	Thr	Ser	Thr 7780	Pro	Gly	Thr		Xaa 7785	Val	Xaa	Leu

Xaa	Thr 7790	Ser	Gly	/ Thr	r Pro	Xaa 7795	Xaa	a Xaa	a Pro	o Xaa	Xaa 7800		c Xaa	a Xaa
Xaa	Pro 7805	Leu	Leu	. Xaa	a Pro	Phe 7810		: Le	ı Asr	n Phe	7815		e Thi	Asn
Leu	Xaa 7820	Tyr	Glu	Glu	ı Xaa	Met 7825		a Xaa	a Pro	Gly	7830		g Lys	s Phe
Asn	Thr 7835	Thr	Glu	Arg	y Val	Leu 7840		Gly	/ Leu	ı Lev	Xaa 7845) Xaa	Phe
Lys	Xaa 7850	Thr	Ser	Val	Gly	Xaa 7855	Leu	туг	Ser	Gly	7 Cys 7860		, Leu	Thr
Leu	Leu 7865	Arg	Xaa	Glu	Lys	Xaa 7870		Ala	a Ala	Thr	Xaa 7875		. Asp	Xaa
Xaa	Cys 7880	Xaa	Xaa	Xaa	Xaa	Asp 7885	Pro	Xaa	. Xaa	Pro	Gly 7890		Asp	Arg
Glu	Xaa 7895	Leu	Tyr	Trp	Glu	Leu 7900		Xaa	Leu	Thr	Xaa 7905		Ile	Xaa
Glu	Leu 7910	Gly	Pro	Tyr	Xaa	Leu 7915		Arg	Xaa	Ser	Leu 7920	_	Val	Asn
Gly	Phe 7925	Thr	His	Arg	Ser	Phe 7930	Gly	Leu	Thr	Thr	Ser 7935		Pro	Trp
Thr	Ser 7940	Thr	Val	Asp	Leu	Gly 7945	Thr	Ser	Gly	Thr	Pro 7950		Pro	Val
Pro	Ser 7955	Pro	Thr	Thr	Ala	Gly 7960		Leu	Leu	Val	Pro 7965	Phe	Thr	Leu
Asn	Phe 7970	Thr	Ile	Thr	Asn	Leu 7975	Gln	Tyr	Glu	Glu	Asp 7980	Met	His	Arg
Pro	Gly 7985	Ser	Arg	Lys	Phe	Asn 7990	Thr	Thr	Glu	Arg	Val 7995	Leu	Gln	Gly
Leu	Leu 8000	Thr	Pro	Leu	Phe	Arg 8005	Asn	Thr	Ser	Val	Ser 8010	Ser	Leu	Tyr
Ser	Gly 8015	Cys	Arg	Leu	Thr	Leu 8020	Leu	Arg	Pro	Glu	Lys 8025	Asp	Gly	Ala
Ala	Thr 8030	Arg	Val	Asp	Ala	Val 8035	Cys	Thr	His	Arg	Pro 8040	Asp	Pro	Lys
Ser	Pro 8045	Gly	Leu	Asp	Arg	Glu 8050	Xaa	Leu	Tyr	Trp	Glu 8055	Leu	Ser	Xaa
Leu	Thr 8060	Xaa	Xaa	Ile		Glu 8065	Leu	Gly	Pro	Tyr	Xaa 8070	Leu	Asp	Arg
	Ser 8075	Leu	Tyr	Val		Gly 8080	Phe	Xaa	Xaa	Xaa	Xaa 8085	Xaa	Xaa	Xaa

Xaa	Thr 8090		Thr	Pro	Gly	Thr 8095		Xaa	Val	Xaa	Leu 8100		Thr	Ser
Gly	Thr 8105	Pro	Xaa	Xaa	Xaa	Pro 8110		Xaa	Thr	Xaa	Xaa 8115		Pro	Leu
Leu	Xaa 8120		Phe	Thr	Leu	Asn 8125		Thr	Ile	Thr	Asn 8130		Xaa	Tyr
Glu	Glu 8135	Xaa	Met	Хаа	Xaa	Pro 8140		Ser	Arg	Lys	Phe 8145		Thr	Thr
Glu	Arg 8150	Val	Leu	Gln	Gly	Leu 8155		Xaa	Pro	Xaa	Phe 8160		Xaa	Thr
Ser	Val 8165	Gly	Xaa	Leu	Tyr	Ser 8170		Cys	Arg	Leu	Thr 8175	Leu	Leu	Arg
Xaa	Glu 8180	Lys	Xaa	Xaa	Ala	Ala 8185		Xaa	Val	Asp	Xaa 8190	Xaa	Cys	Xaa
Xaa	Xaa 8195	Xaa	Asp	Pro	Xaa	Xaa 8200		Gly	Leu	Asp	Arg 8205		Xaa	Leu
Tyr	Trp 8210	Glu	Leu	Ser	Xaa	Leu 8215	Thr	Xaa	Xaa	Ile	Xaa 8220	Glu	Leu	Gly
Pro	Tyr 8225	Xaa	Leu	Asp	Arg	Xaa 8230		Leu	Tyr	Val	Asn 8235	Gly	Phe	Thr
His	Trp 8240	Ile	Pro	Val	Pro	Thr 8245	Ser	Ser	Thr	Pro	Gly 8250	Thr	Ser	Thr
Val	Asp 8255	Leu	Gly	Ser	Gly	Thr 8260	Pro	Ser	Ser	Leu	Pro 8265	Ser	Pro	Thr
Thr	Ala 8270	Gly	Pro	Leu		Val 8275	Pro	Phe	Thr	Leu	Asn 8280	Phe	Thr	Ile
Thr	Asn 8285	Leu	Gln	Tyr	Gly	Glu 8290	Asp	Met	Gly	His	Pro 8295	Gly	Ser	Arg
Lys	Phe 8300	Asn	Thr	Thr	Glu	Arg 8305	Val	Leu	Gln	Gly	Leu 8310	Leu	Gly	Pro
Ile	Phe 8315	Lys	Asn	Thr	Ser	Val 8320	Gly	Pro	Leu	Tyr	Ser 8325	Gly	Cys	Arg
Leu	Thr 8330	Ser	Leu	Arg	Ser	Glu 8335	Lys	Asp	Gly	Ala	Ala 8340	Thr	Gly	Val
Asp	Ala 8345	Ile	Cys	Ile	His	His 8350	Leu	Asp	Pro	Lys	Ser 8355	Pro	Gly	Leu
Asp	Arg 8360	Glu	Xaa	Leu	Tyr	Trp 8365	Glu	Leu	Ser	Xaa	Leu 8370	Thr	Xaa	Xaa
Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser	Leu	Tyr

	8375					8380					8385			
Val	Asn 8390		Phe	Xaa	Xaa	Xaa 8395		Xaa	Xaa	Xaa	Xaa 8400		Ser	Thr
Pro	Gly 8405	Thr	Ser	Xaa	Val	Xaa 8410		Xaa	Thr	Ser	Gly 8415		Pro	Xaa
Xaa	Xaa 8420		Xaa	Xaa	Thr	Xaa 8425		Xaa	Pro	Leu	Leu 8430		Pro	Phe
Thr	Leu 8435	Asn	Phe	Thr	Ile	Thr 8440		Leu	Xaa	Tyr	Glu 8445		Xaa	Met
Xaa	Xaa 8450	Pro	Gly	Ser		Lys 8455		Asn	Thr	Thr	Glu 8460	Arg	Val	Leu
Gln	Gly 8465	Leu	Leu	Xaa	Pro	Xaa 8470		Lys	Xaa	Thr	Ser 8475	Val	Gly	Xaa
Leu	Tyr 8480	Ser	Gly	Cys	Arg	Leu 8485		Leu	Leu	Arg	Xaa 8490	Glu	Lys	Xaa
Xaa	Ala 8495	Ala	Thr	Xaa	Val	Asp 8500	Xaa	Xaa	Cys	Xaa	Xaa 8505	Xaa	Xaa	Asp
Pro	Xaa 8510	Xaa	Pro	Gly	Leu	Asp 8515	Arg	Glu	Xaa	Leu	Tyr 8520	Trp	Glu	Leu
Ser	Xaa 8525	Leu	Thr	Xaa	Xaa	Ile 8530	Xaa	Glu	Leu	Gly	Pro 8535	Tyr	Xaa	Leu
Asp	Arg 8540	Xaa	Ser	Leu	Tyr	Val 8545	Asn	Gly	Phe	Thr	His 8550	Gln	Thr	Phe
Ala	Pro 8555	Asn	Thr	Ser	Thr	Pro 8560	Gly	Thr	Ser	Thr	Val 8565	Asp	Leu	Gly
Thr	Ser 8570	Gly	Thr	Pro	Ser	Ser 8575	Leu	Pro	Ser	Pro	Thr 8580	Ser	Ala	Gly
Pro	Leu 8585	Leu	Val	Pro	Phe	Thr 8590	Leu	Asn	Phe	Thr	Ile 8595	Thr	Asn	Leu
Gln	Tyr 8600	Glu	Glu	Asp	Met	His 8605	His	Pro	Gly	Ser	Arg 8610	Lys	Phe	Asn
Thr	Thr 8615	Glu	Arg	Val	Leu	Gln 8620	Gly	Leu	Leu	Gly	Pro 8625	Met	Phe	Lys
Asn	Thr 8630	Ser	Val	Gly	Leu	Leu 8635	Tyr	Ser	Gly	Cys	Arg 8640	Leu	Thr	Leu
Leu	Arg 8645	Pro	Glu	Lys	Asn	Gly 8650	Ala	Ala	Thr	Arg	Val 8655	Asp	Ala	Val
Cys	Thr 8660	His	Arg	Pro	Asp	Pro 8665	Lys	Ser	Pro	Gly	Leu 8670	Asp	Arg	Glu

Xaa	Leu 8675	Tyr	Trp	o Glu	ı Lev	Ser 8680		Leu	Thr	Xa <i>a</i>	Xaa 8685		: Xaa	Glu
Leu	Gly 8690	Pro	Tyr	: Xaa	Leu	Asp 8695		Xaa	Ser	Leu	Tyr 8700		Asn	Gly
Phe	Xaa 8705	Xaa	Xaa	a Xaa	Хаа	Xaa 8710		Xaa	Thr	Ser	Thr 8715		Gly	Thr
Ser	Xaa 8720	Val	Xaa	Leu	ı Xaa	Thr 8725		Gly	Thr	Pro	Xaa 8730		Xaa	Pro
Xaa	Xaa 8735	Thr	Xaa	. Xaa	Xaa	Pro 8740		Leu	Xaa	Pro	Phe 8745		Leu	Asn
Phe	Thr 8750	Ile	Thr	Asn	Leu	Xaa 8755		Glu	Glu	Xaa	Met 8760		Xaa	Pro
Gly	Ser 8765		Lys	Phe	Asn	Thr 8770		Glu	Arg	Val	Leu 8775		Gly	Leu
Leu	Lys 8780	Pro	Leu	Phe	Lys	Ser 8785		Ser	Val	Gly	Pro 8790		Tyr	Ser
Gly	Cys 8795	Arg	Leu	Thr	Leu	Leu 8800		Pro	Glu	Lys	Asp 8805		Val	Ala
Thr	Arg 8810	Val	Asp	Ala	Ile	Cys 8815		His	Arg	Pro	Asp 8820	Pro	Lys	Ile
Pro	Gly 8825	Leu	Asp	Arg	Gln	Gln 8830	Leu	Tyr	Trp	Glu	Leu 8835	Ser	Gln	Leu
Thr	His 8840	Ser	Ile	Thr	Glu	Leu 8845		Pro	Tyr	Thr	Leu 8850	Asp	Arg	Asp
Ser	Leu 8855	Tyr	Val	Asn	Gly	Phe 8860	Thr	Gln	Arg	Ser	Ser 8865	Val	Pro	Thr
Thr	Ser 8870	Thr	Pro	Gly	Thr	Phe 8875	Thr	Val	Gln	Pro	Glu 8880	Thr	Ser	Glu
Thr	Pro 8885	Ser	Ser	Leu	Pro	Gly 8890	Pro	Thr	Ala	Thr	Gly 8895	Pro	Val	Leu
Leu	Pro 8900	Phe	Thr	Leu	Asn	Phe 8905	Thr	Ile	Thr	Asn	Leu 8910	Gln	Tyr	Glu
Glu	Asp 8915	Met	His	Arg	Pro	Gly 8920	Ser	Arg	Lys	Phe	Asn 8925	Thr	Thr	Glu
Arg	Val 8930	Leu	Gln	Gly	Leu	Leu 8935	Met	Pro	Leu	Phe	Lys 8940	Asn	Thr	Ser
Val	Ser 8945	Ser	Leu	Tyr	Ser	Gly 8950	Cys	Arg	Leu	Thr	Leu 8955	Leu	Arg	Pro
Glu	Lys 8960	Asp	Gly	Ala	Ala	Thr 8965	Arg	Val	Asp	Ala	Val 8970	Cys	Thr	His

Arg	Pro 8975		Pro	Lys	Ser	Pro 8980	-	Leu	Asp	Arg	Glu 8985	-	Leu	Tyr
Trp	Lys 8990	Leu	Ser	Gln	Leu	Thr 8995	His	Gly	Ile	Thr	Glu 9000		Gly	Pro
Tyr	Thr 9005	Leu	Asp	Arg	His	Ser 9010		Tyr	Val	Asn	Gly 9015		Thr	His
Gln	Ser 9020	Ser	Met	Thr	Thr	Thr 9025	Arg	Thr	Pro	Asp	Thr 9030		Thr	Met
His	Leu 9035	Ala	Thr	Ser	Arg	Thr 9040		Ala	Ser	Leu	Ser 9045		Pro	Thr
Thr	Ala 9050	Ser	Pro	Leu	Leu	Val 9055	Leu	Phe	Thr	Ile	Asn 9060	Phe	Thr	Ile
Thr	Asn 9065	Leu	Arg	Tyr	Glu	Glu 9070	Asn	Met	His	His	Pro 9075	Gly	Ser	Arg
Lys	Phe 9080	Asn	Thr	Thr	Glu	Arg 9085		Leu	Gln	Gly	Leu 9090	Leu	Arg	Pro
Val	Phe 9095	Lys	Asn	Thr	Ser	Val 9100	Gly	Pro	Leu	Tyr	Ser 9105	Gly	Cys	Arg
Leu	Thr 9110	Leu	Leu	Arg	Pro	Lys 9115	Lys	Asp	Gly	Ala	Ala 9120	Thr	Lys	Val
Asp	Ala 9125	Ile	Cys	Thr	Tyr	Arg 9130	Pro	Asp	Pro	Lys	Ser 9135	Pro	Gly	Leu
Asp	Arg 9140	Glu	Gln	Leu	Tyr	Trp 9145	Glu	Leu	Ser	Gln	Leu 9150	Thr	His	Ser
Ile	Thr 9155	Glu	Leu	Gly		Tyr 9160	Thr	Gln	Asp	Arg	Asp 9165	Ser	Leu	Tyr
Asn	Val 9170	Gly	Phe	Thr	Gln	Arg 9175	Ser	Ser	Val	Pro	Thr 9180	Thr	Ser	Val
Pro	Gly 9185	Thr	Pro	Thr	Val	Asp 9190	Leu	Gly	Thr	Ser	Gly 9195	Thr	Pro	Val
Ser	Lys 9200	Pro	Gly	Pro	Ser	Ala 9205	Ala	Ser	Pro	Leu	Leu 9210	Val	Leu	Phe
Thr	Leu 9215	Asn	Gly	Thr	Ile	Thr 9220	Asn	Leu	Arg	Tyr	Glu 9225	Glu	Asn	Met
Gln	His 9230	Pro	Gly	Ser	Arg	Lys 9235	Phe	Asn	Thr	Thr	Glu 9240	Arg	Val	Leu
Gln	Gly 9245	Leu	Leu	Arg	Ser	Leu 9250	Phe	Lys	Ser	Thr	Ser 9255	Val	Gly	Pro
Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Asp

	9260					9265	,				9270)		
Gly	Thr 9275		Thr	Gly	Val	Asp 9280		Ile	Cys	Thr	His 9285		Pro	Asp
Pro	Lys 9290		Pro	Arg	Leu	Asp 9295		Glu	Gln	Leu	Tyr 9300		Glu	Leu
Ser	Gln 9305		Thr	His	Asn	Ile 9310		Glu	Leu	Gly	His 9315		Ala	Leu
Asp	Asn 9320		Ser	Leu	Phe	Val 9325		Gly	Phe	Thr	His 9330		Ser	Ser
Val	Ser 9335		Thr	Ser	Thr	Pro 9340		Thr	Pro	Thr	Val 9345		Leu	Gly
Ala	Ser 9350		Thr	Pro	Ala	Ser 9355		Phe	Gly	Pro	Ser 9360		Ala	Ser
His	Leu 9365		Ile	Leu	Phe	Thr 9370		Asn	Phe	Thr	Ile 9375		Asn	Leu
Arg	Tyr 9380		Glu	Asn	Met	Trp 9385		Gly	Ser	Arg	Lys 9390		Asn	Thr
Thr	Glu 9395		Val	Leu	Gln	Gly 9400	Leu	Leu	Arg	Pro	Leu 9405	Phe	Lys	Asn
Thr	Ser 9410	Val	Gly	Pro	Leu	Tyr 9415	Ser	Gly	Ser	Arg	Leu 9420	Thr	Leu	Leu
Arg	Pro 9425	Glu	Lys	Asp	Gly	Glu 9430	Ala	Thr	Gly	Val	Asp 9435	Ala	Ile	Cys
Thr	His 9440	Arg	Pro	Asp	Pro	Thr 9445	Gly	Pro	Gly	Leu	Asp 9450	Arg	Glu	Gln
Leu	Tyr 9455	Leu	Glu	Leu	Ser	Gln 9460	Leu	Thr	His	Ser	Ile 9465	Thr	Glu	Leu
Gly	Pro 9470	Tyr	Thr	Leu	Asp	Arg 9475	Asp	Ser	Leu	Tyr	Val 9480	Asn	Gly	Phe
Thr	His 9485	Arg	Ser	Ser	Val	Pro 9490	Thr	Thr	Ser	Thr	Gly 9495	Val	Val	Ser
Glu	Glu 9500	Pro	Phe	Thr	Leu	Asn 9505	Phe	Thr	Ile	Asn	Asn 9510	Leu	Arg	Tyr
Met	Ala 9515	Asp	Met	Gly	Gln	Pro 9520	Gly	Ser	Leu	Lys	Phe 9525	Asn	Ile	Thr
Asp	Asn 9530	Val	Met	Lys	His	Leu 9535	Leu	Ser	Pro	Leu	Phe 9540	Gln	Arg	Ser
Ser	Leu 9545	Gly	Ala	Arg	Tyr	Thr 9550	Gly	Cys	Arg	Val	Ile 9555	Ala	Leu	Arg

Ser	Val 9560		Asn	Gly	Ala	Glu 9565		Arg	Val	Asp	Leu 9570		Cys	Thr
Tyr	Leu 9575		Pro	Leu	Ser	Gly 9580		Gly	Leu	Pro	Ile 9585		Gln	Val
Phe	His 9590	Glu	Leu	Ser	Gln	Gln 9595		His	Gly	Ile	Thr 9600	_	Leu	Gly
Pro	Tyr 9605	Ser	Leu	Asp	Lys	Asp 9610		Leu	Tyr	Leu	Asn 9615		Tyr	Asn
Glu	Pro 9620	Gly	Leu	Asp	Glu	Pro 9625		Thr	Thr	Pro	Lys 9630	Pro	Ala	Thr
Thr	Phe 9635	Leu	Pro	Pro	Leu	Ser 9640		Ala	Thr	Thr	Ala 9645		Gly	Tyr
His	Leu 9650	Lys	Thr	Leu	Thr	Leu 9655	Asn	Phe	Thr	Ile	Ser 9660	Asn	Leu	Gln
Tyr	Ser 9665	Pro	Asp	Met	Gly	Lys 9670		Ser	Ala	Thr	Phe 9675	Asn	Ser	Thr
Glu	Gly 9680	Val	Leu	Gln	His	Leu 9685	Leu	Arg	Pro	Leu	Phe 9690	Gln	Lys	Ser
Ser	Met 9695	Gly	Pro	Phe	Tyr	Leu 9700	Gly	Cys	Gln	Leu	Ile 9705	Ser	Leu	Arg
Pro	Glu 9710	Lys	Asp	Gly	Ala	Ala 9715	Thr	Gly	Val	Asp	Thr 9720	Thr	Cys	Thr
Tyr	His 9725	Pro	Asp	Pro	Val	Gly 9730	Pro	Gly	Leu	Asp	Ile 9735	Gln	Gln	Leu
Tyr	Trp 9740	Glu	Leu	Ser	Gln	Leu 9745	Thr	His	Gly	Val	Thr 9750	Gln	Leu	Gly
Phe	Tyr 9755	Val	Leu	Asp	Arg	Asp 9760	Ser	Leu	Phe	Ile	Asn 9765	Gly	Tyr	Ala
Pro	Gln 9770	Asn	Leu	Ser	Ile	Arg 9775	Gly	Glu	Tyr	Gln	Ile 9780	Asn	Phe	His
Ile	Val 9785	Asn	Trp	Asn	Leu	Ser 9790	Asn	Pro	Asp	Pro	Thr 9795	Ser	Ser	Glu

Tyr

<210> 147

<211> 1422

<212> DNA

<213> Homo sapiens

<400> 14	7					
gccatggggt	accacctgaa	gaccctcaca	ctcaacttca	ccatctccaa	tctccagtat	60
tcaccagata	a tgggcaaggg	g ctcagctaca	ttcaactcca	ccgagggggt	ccttcagcac	120
ctgctcagac	ccttgttcca	gaagagcagc	: atgggcccct	tctacttggg	ttgccaactg	180
atctccctca	a ggcctgagaa	ggatggggca	gccactggtg	tggacaccac	ctgcacctac	240
caccctgacc	ctgtgggccc	: cgggctggac	atacagcagc	tttactggga	gctgagtcag	300
ctgacccatg	gtgtcaccca	actgggcttc	tatgtcctgg	acagggatag	cctcttcatc	360
aatggctatg	caccccagaa	tttatcaatc	cggggcgagt	accagataaa	tttccacatt	420
gtcaactgga	acctcagtaa	tccagacccc	acatcctcag	agtacatcac	cctgctgagg	480
gacatccagg	acaaggtcac	cacactctac	aaaggcagtc	aactacatga	cacattccgc	540
ttctgcctgg	tcaccaactt	gacgatggac	tccgtgttgg	tcactgtcaa	ggcattgttc	600
tcctccaatt	tggaccccag	cctggtggag	caagtctttc	tagataagac	cctgaatgcc	660
tcattccatt	ggctgggctc	cacctaccag	ttggtggaca	tccatgtgac	agaaatggag	720
tcatcagttt	atcaaccaac	aagcagctcc	agcacccagc	acttctacct	gaatttcacc	780
atcaccaacc	taccatattc	ccaggacaaa	gcccagccag	gcaccaccaa	ttaccagagg	840
aacaaaagga	atattgagga	tgcgctcaac	caactcttcc	gaaacagcag	catcaagagt	900
tatttttctg	actgtcaagt	ttcaacattc	aggtctgtcc	ccaacaggca	ccacaccggg	960
gtggactccc	tgtgtaactt	ctcgccactg	gctcggagag	tagacagagt	tgccatctat	1020
gaggaatttc	tgcggatgac	ccggaatggt	acccagetge	agaacttcac	cctggacagg	1080
agcagtgtcc	ttgtggatgg	gtattctccc	aacagaaatg	agcccttaac	tgggaattct	1140
gaccttccct	tctgggctgt	catcctcatc	ggcttggcag	gactcctggg	actcatcaca	1200
tgcctgatct	gcggtgtcct	ggtgaccacc	cgccggcgga	agaaggaagg	agaatacaac	1260
gtccagcaac	agtgcccagg	ctactaccag	tcacacctag	acctggagga	tctgcaatga	1320
ctggaacttg	ccggtgcctg	gggtgccttt	ccccagcca	gggtccaaag	aagcttggct	1380
ggggcagaaa	taaaccatat	tggtcggaaa	aaaaaaaaa	aa		1422

<210> 148

<211> 439

<212> PRT

<213> Homo sapiens

<400> 148

Ala Met Gly Tyr His Leu Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Asn Leu Gln Tyr Ser Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn 20 25 30

Ser Thr Glu Gly Val Leu Gln His Leu Leu Arg Pro Leu Phe Gln Lys 35 40 45

Ser Ser Met Gly Pro Phe Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg 50 55 60

Pro Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Thr Thr Cys Thr Tyr 65 70 75 80

His Pro Asp Pro Val Gly Pro Gly Leu Asp Ile Gln Gln Leu Tyr Trp 85 90 95

Glu Leu Ser Gln Leu Thr His Gly Val Thr Gln Leu Gly Phe Tyr Val 100 105 110

Leu Asp Arg Asp Ser Leu Phe Ile Asn Gly Tyr Ala Pro Gln Asn Leu 115 120 125

Ser Ile Arg Gly Glu Tyr Gln Ile Asn Phe His Ile Val Asn Trp Asn 130 135 140

Leu Ser Asn Pro Asp Pro Thr Ser Ser Glu Tyr Ile Thr Leu Leu Arg 145 150 155 160

Asp Ile Gln Asp Lys Val Thr Thr Leu Tyr Lys Gly Ser Gln Leu His 165 170 175

Asp Thr Phe Arg Phe Cys Leu Val Thr Asn Leu Thr Met Asp Ser Val 180 185 190

Leu Val Thr Val Lys Ala Leu Phe Ser Ser Asn Leu Asp Pro Ser Leu 195 200 205

Val Glu Gln Val Phe Leu Asp Lys Thr Leu Asn Ala Ser Phe His Trp 210 215 220

Leu Gly Ser Thr Tyr Gln Leu Val Asp Ile His Val Thr Glu Met Glu 225 230 235 240

Ser Ser Val Tyr Gln Pro Thr Ser Ser Ser Ser Thr Gln His Phe Tyr
245 250 255

Leu Asn Phe Thr Ile Thr Asn Leu Pro Tyr Ser Gln Asp Lys Ala Gln 260 265 270

Pro Gly Thr Thr Asn Tyr Gln Arg Asn Lys Arg Asn Ile Glu Asp Ala 275 280 285 Leu Asn Gln Leu Phe Arg Asn Ser Ser Ile Lys Ser Tyr Phe Ser Asp 290 295 300

Cys Gln Val Ser Thr Phe Arg Ser Val Pro Asn Arg His His Thr Gly 305 310 315 320

Val Asp Ser Leu Cys Asn Phe Ser Pro Leu Ala Arg Arg Val Asp Arg 325 330 335

Val Ala Ile Tyr Glu Glu Phe Leu Arg Met Thr Arg Asn Gly Thr Gln 340 345 350

Leu Gln Asn Phe Thr Leu Asp Arg Ser Ser Val Leu Val Asp Gly Tyr 355 360 365

Ser Pro Asn Arg Asn Glu Pro Leu Thr Gly Asn Ser Asp Leu Pro Phe 370 380

Trp Ala Val Ile Leu Ile Gly Leu Ala Gly Leu Leu Gly Leu Ile Thr 385 390 395 400

Cys Leu Ile Cys Gly Val Leu Val Thr Thr Arg Arg Arg Lys Lys Glu $405 \hspace{1.5cm} 410 \hspace{1.5cm} 415$

Gly Glu Tyr Asn Val Gln Gln Gln Cys Pro Gly Tyr Tyr Gln Ser His 420 425 430

Leu Asp Leu Glu Asp Leu Gln 435

<210> 149

<211> 1799

<212> PRT

<213> Homo sapiens

<400> 149

Arg Thr Asp Gly Ile Met Glu His Ile Thr Lys Ile Pro Asn Glu Ala 1 5 10 15

Ala His Arg Gly Thr Ile Arg Pro Val Lys Gly Pro Gln Thr Ser Thr 20 25 30

Ser Pro Ala Ser Pro Lys Gly Leu His Thr Gly Gly Thr Lys Arg Met 35 40 45

Glu Thr Thr Thr Thr Ala Leu Lys Thr Thr Thr Thr Ala Leu Lys Thr 50 55 60

Thr Ser Arg Ala Thr Leu Thr Thr Ser Val Tyr Thr Pro Thr Leu Gly 65 70 75 80

Thr Leu Thr Pro Leu Asn Ala Ser Arg Gln Met Ala Ser Thr Ile Leu

85 90 95 Thr Glu Met Met Ile Thr Thr Pro Tyr Val Phe Pro Asp Val Pro Glu 100 105 Thr Thr Ser Ser Leu Ala Thr Ser Leu Gly Ala Glu Thr Ser Thr Ala Leu Pro Arg Thr Thr Pro Ser Val Leu Asn Arg Glu Ser Glu Thr Thr 135 Ala Ser Leu Val Ser Arg Ser Gly Ala Glu Arg Ser Pro Val Ile Gln 150 155 Thr Leu Asp Val Ser Ser Ser Glu Pro Asp Thr Thr Ala Ser Trp Val Ile His Pro Ala Glu Thr Ile Pro Thr Val Ser Lys Thr Thr Pro Asn Phe Phe His Ser Glu Leu Asp Thr Val Ser Ser Thr Ala Thr Ser His Gly Ala Asp Val Ser Ser Ala Ile Pro Thr Asn Ile Ser Pro Ser Glu 215 Leu Asp Ala Leu Thr Pro Leu Val Thr Ile Ser Gly Thr Asp Thr Ser 235 225 230 Thr Thr Phe Pro Thr Leu Thr Lys Ser Pro His Glu Thr Glu Thr Arg 245 250 Thr Thr Trp Leu Thr His Pro Ala Glu Thr Ser Ser Thr Ile Pro Arg 260 265 Thr Ile Pro Asn Phe Ser His His Glu Ser Asp Ala Thr Pro Ser Ile 280 Ala Thr Ser Pro Gly Ala Glu Thr Ser Ser Ala Ile Pro Ile Met Thr Val Ser Pro Gly Ala Glu Asp Leu Val Thr Ser Gln Val Thr Ser Ser 315 305 Gly Thr Asp Arg Asn Met Thr Ile Pro Thr Leu Thr Leu Ser Pro Gly 325 330 Glu Pro Lys Thr Ile Ala Ser Leu Val Thr His Pro Glu Ala Gln Thr 345 Ser Ser Ala Ile Pro Thr Ser Thr Ile Ser Pro Ala Val Ser Arg Leu Val Thr Ser Met Val Thr Ser Leu Ala Ala Lys Thr Ser Thr Thr Asn 375 Arg Ala Leu Thr Asn Ser Pro Gly Glu Pro Ala Thr Thr Val Ser Leu 395 390

Val Thr His Pro Ala Gln Thr Ser Pro Thr Val Pro Trp Thr Thr Ser 405 410 Ile Phe Phe His Ser Lys Ser Asp Thr Thr Pro Ser Met Thr Thr Ser 420 425 His Gly Ala Glu Ser Ser Ser Ala Val Pro Thr Pro Thr Val Ser Thr 435 440 Glu Val Pro Gly Val Val Thr Pro Leu Val Thr Ser Ser Arg Ala Val 455 Ile Ser Thr Thr Ile Pro Ile Leu Thr Leu Ser Pro Gly Glu Pro Glu 465 470 475 Thr Thr Pro Ser Met Ala Thr Ser His Gly Glu Glu Ala Ser Ser Ala 485 490 Ile Pro Thr Pro Thr Val Ser Pro Gly Val Pro Gly Val Val Thr Ser 505 Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr Thr Ile Pro Ile Leu 520 Thr Phe Ser Leu Gly Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser 535 His Gly Thr Glu Ala Gly Ser Ala Val Pro Thr Val Leu Pro Glu Val 555 Pro Gly Met Val Thr Ser Leu Val Ala Ser Ser Arg Ala Val Thr Ser Thr Thr Leu Pro Thr Leu Thr Leu Ser Pro Gly Glu Pro Glu Thr Thr 585 580 Pro Ser Met Ala Thr Ser His Gly Ala Glu Ala Ser Ser Thr Val Pro 600 605 Thr Val Ser Pro Glu Val Pro Gly Val Val Thr Ser Leu Val Thr Ser 610 615 Ser Ser Gly Val Asn Ser Thr Ser Ile Pro Thr Leu Ile Leu Ser Pro 630 635 Gly Glu Leu Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Ala Glu 645 Ala Ser Ser Ala Val Pro Thr Pro Thr Val Ser Pro Gly Val Ser Gly 665 Val Val Thr Pro Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr Thr 680 Ile Pro Ile Leu Thr Leu Ser Ser Glu Pro Glu Thr Thr Pro Ser 695 Met Ala Thr Ser His Gly Val Glu Ala Ser Ser Ala Val Leu Thr Val 705 710 715 720

Ser Pro Glu Val Pro Gly Met Val Thr Ser Leu Val Thr Ser Ser Arg 725 Ala Val Thr Ser Thr Thr Ile Pro Thr Leu Thr Ile Ser Ser Asp Glu 745 740 Pro Glu Thr Thr Ser Leu Val Thr His Ser Glu Ala Lys Met Ile Ser Ala Ile Pro Thr Leu Ala Val Ser Pro Thr Val Gln Gly Leu Val 775 Thr Ser Leu Val Thr Ser Ser Gly Ser Glu Thr Ser Ala Phe Ser Asn 795 790 Leu Thr Val Ala Ser Ser Gln Pro Glu Thr Ile Asp Ser Trp Val Ala 805 810 His Pro Gly Thr Glu Ala Ser Ser Val Val Pro Thr Leu Thr Val Ser 825 Thr Gly Glu Pro Phe Thr Asn Ile Ser Leu Val Thr His Pro Ala Glu Ser Ser Ser Thr Leu Pro Arg Thr Thr Ser Arg Phe Ser His Ser Glu 855 Leu Asp Thr Met Pro Ser Thr Val Thr Ser Pro Glu Ala Glu Ser Ser 870 875 865 Ser Ala Ile Ser Thr Thr Ile Ser Pro Gly Ile Pro Gly Val Leu Thr 890 885 Ser Leu Val Thr Ser Ser Gly Arg Asp Ile Ser Ala Thr Phe Pro Thr 900 905 Val Pro Glu Ser Pro His Glu Ser Glu Ala Thr Ala Ser Trp Val Thr 920 His Pro Ala Val Thr Ser Thr Thr Val Pro Arg Thr Thr Pro Asn Tyr 930 935 940 Ser His Ser Glu Pro Asp Thr Thr Pro Ser Ile Ala Thr Ser Pro Gly Ala Glu Ala Thr Ser Asp Phe Pro Thr Ile Thr Val Ser Pro Asp Val 970 Pro Asp Met Val Thr Ser Gln Val Thr Ser Ser Gly Thr Asp Thr Ser Ile Thr Ile Pro Thr Leu Thr Leu Ser Ser Gly Glu Pro Glu Thr Thr 1000 1005 Thr Ser Phe Ile Thr Tyr Ser Glu Thr His Thr Ser Ser Ala Ile 1010 1015 Pro Thr Leu Pro Val Ser Pro Gly Ala Ser Lys Met Leu Thr Ser

	1025					1030					1035			
Leu	Val 1040	Ile	Ser	Ser	Gly	Thr 1045	Asp	Ser	Thr	Thr	Thr 1050	Phe	Pro	Thr
Leu	Thr 1055	Glu	Thr	Pro	Tyr	Glu 1060	Pro	Glu	Thr	Thr	Ala 1065	Ile	Gln	Leu
Ile	His 1070	Pro	Ala	Glu	Thr	Asn 1075	Thr	Met	Val	Pro	Arg 1080	Thr	Thr	Pro
Lys	Phe 1085	Ser	His	Ser	Lys	Ser 1090	Asp	Thr	Thr	Leu	Pro 1095	Val	Ala	Ile
Thr	Ser 1100	Pro	Gly	Pro	Glu	Ala 1105	Ser	Ser	Ala	Val	Ser 1110	Thr	Thr	Thr
Ile	Ser 1115	Pro	Asp	Met	Ser	Asp 1120		Val	Thr	Ser	Leu 1125	Val	Pro	Ser
Ser	Gly 1130	Thr	Asp	Thr	Ser	Thr 1135	Thr	Phe	Pro	Thr	Leu 1140	Ser	Glu	Thr
Pro	Tyr 1145	Glu	Pro	Glu	Thr	Thr 1150	Ala	Thr	Trp	Leu	Thr 1155	His	Pro	Ala
Glu	Thr 1160	Ser	Thr	Thr	Val	Ser 1165	Gly	Thr	Ile	Pro	Asn 1170	Phe	Ser	His
Arg	Gly 1175	Ser	Asp	Thr	Ala	Pro 1180	Ser	Met	Val	Thr	Ser 1185	Pro	Gly	Val
Asp	Thr 1190	Arg	Ser	Gly	Val	Pro 1195	Thr	Thr	Thr	Ile	Pro 1200	Pro	Ser	Ile
Pro	Gly 1205	Val	Val	Thr	Ser	Gln 1210	Val	Thr	Ser	Ser	Ala 1215	Thr	Asp	Thr
Ser	Thr 1220	Ala	Ile	Pro	Thr	Leu 1225	Thr	Pro	Ser	Pro	Gly 1230	Glu	Pro	Glu
Thr	Thr 1235	Ala	Ser	Ser	Ala	Thr 1240	His	Pro	Gly	Thr	Gln 1245	Thr	Gly	Phe
Thr	Val 1250	Pro	Ile	Arg	Thr	Val 1255	Pro	Ser	Ser	Glu	Pro 1260	Asp	Thr	Met
Ala	Ser 1265	Trp	Val	Thr	His	Pro 1270	Pro	Gln	Thr	Ser	Thr 1275	Pro	Val	Ser
Arg	Thr 1280	Thr	Ser	Ser	Phe	Ser 1285	His	Ser	Ser	Pro	Asp 1290	Ala	Thr	Pro
Val	Met 1295	Ala	Thr	Ser	Pro	Arg 1300	Thr	Glu	Ala	Ser	Ser 1305	Ala	Val	Leu
Thr	Thr 1310	Ile	Ser	Pro	Gly	Ala 1315	Pro	Glu	Met	Val	Thr 1320	Ser	Gln	Ile

Thr	Ser 1325	Ser	Gly	Ala	Ala	Thr 1330	Ser	Thr	Thr	Val	Pro 1335	Thr	Leu	Thr
His	Ser 1340	Pro	Gly	Met	Pro	Glu 1345	Thr	Thr	Ala	Leu	Leu 1350	Ser	Thr	His
Pro	Arg 1355	Thr	Glu	Thr	Ser	Lys 1360		Phe	Pro	Ala	Ser 1365	Thr	Val	Phe
Pro	Gln 1370	Val	Ser	Glu	Thr	Thr 1375	Ala	Ser	Leu	Thr	Ile 1380	Arg	Pro	Gly
Ala	Glu 1385	Thr	Ser	Thr	Ala	Leu 1390	Pro	Thr	Gln	Thr	Thr 1395	Ser	Ser	Leu
Phe	Thr 1400	Leu	Leu	Val	Thr	Gly 1405	Thr	Ser	Arg	Val	Asp 1410	Leu	Ser	Pro
Thr	Ala 1415	Ser	Pro	Gly	Val	Ser 1420	Ala	Lys	Thr	Ala	Pro 1425	Leu	Ser	Thr
His	Pro 1430	Gly	Thr	Glu	Thr	Ser 1435	Thr	Met	Ile	Pro	Thr 1440	Ser	Thr	Leu
Ser	Leu 1445	Gly	Leu	Leu	Glu	Thr 1450		Gly	Leu	Leu	Ala 1455		Ser	Ser
Ser	Ala 1460	Glu	Thr	Ser	Thr	Ser 1465	Thr	Leu	Thr	Leu	Thr 1470	Val	Ser	Pro
Ala	Val 1475	Ser	Gly	Leu	Ser	Ser 1480		Ser	Ile	Thr	Thr 1485	Asp	Lys	Pro
Gln	Thr 1490	Val	Thr	Ser	Trp	Asn 1495	Thr	Glu	Thr	Ser	Pro 1500	Ser	Val	Thr
Ser	Val 1505	Gly	Pro	Pro	Glu	Phe 1510	Ser	Arg	Thr	Val	Thr 1515	Gly	Thr	Thr
Met	Thr 1520			Pro		Glu 1525			Thr		Pro 1530	Lys	Thr	Ser
His	Gly 1535		Gly	Val	Ser	Pro 1540	Thr	Thr	Ile	Leu	Arg 1545		Thr	Met
Val	Glu 1550		Thr	Asn	Leu	Ala 1555		Thr	Gly	Ser	Ser 1560	Pro	Thr	Val
Ala	Lys 1565		Thr	Thr	Thr	Phe 1570		Thr	Leu	Ala	Gly 1575		Leu	Phe
Thr	Pro 1580		Thr	Thr	Pro	Gly 1585		Ser	Thr	Leu	Ala 1590	Ser	Glu	Ser
Val	Thr 1595		Arg	Thr	Ser	Tyr 1600		His	Arg	Ser	Trp 1605		Ser	Thr
Thr	Ser 1610		Tyr	Asn	Arg	Arg 1615		Trp	Thr	Pro	Ala 1620		Ser	Thr

Pro Val Thr Ser Thr Phe Ser Pro Gly Ile Ser Thr Ser Ser Ile 1625

Pro Ser Ser Thr Ala Ala Thr Val Pro Phe Met Val Pro Phe Thr

1640 1645 Pro Phe Met Val Pro Phe

Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg 1655 1660 1665

His Pro Gly Ser Arg Lys Phe Asn Ala Thr Glu Arg Glu Leu Gln 1670 1680

Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu 1685 1690 1695

Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser 1700 1705 1710

Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro 1715 1720 1725

Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser 1730 1735 1740

Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp 1745 1750 1755

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met 1760 1765 1770

Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly Thr 1775 1780 1785

Ser Gly Thr Pro Ser Ser Ser Pro Ser Pro Thr 1790 1795

<210> 150

<211> 156

<212> PRT

<213> Homo sapiens

<400> 150

Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys 35 40 45

Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu

50	55		60	
Arg Pro Glu Lys His 65	Glu Ala Ala 70	Thr Gly Val 75	Asp Thr Ile	Cys Thr 80
His Arg Val Asp Pro 85	Ile Gly Pro	Gly Leu Asp 90	-	Leu Tyr 95
Trp Glu Leu Ser Gln 100	Leu Thr Asn	Ser Ile Thr 105	Glu Leu Gly 110	Pro Tyr
Thr Leu Asp Arg Asp 115	Ser Leu Tyr 120	Val Asn Gly	Phe Asn Pro . 125	Arg Ser
Ser Val Pro Thr Thr	Ser Thr Pro 135	Gly Thr Ser	Thr Val His 1	Leu Ala
Thr Ser Gly Thr Pro 145	Ser Ser Leu 150	Pro Lys Leu 155	Thr	
<210> 151				
<211> 507				
<212> DNA				
<213> Homo sapiens				
<220>				
<221> CDS				
<222> (1)(507)				
<400> 151				
atg aga gga tcg cat Met Arg Gly Ser His 1			Ser Met Gly	
gag cct ggc cct ctc Glu Pro Gly Pro Leu 20				
aac ctg cat tat gag Asn Leu His Tyr Glu 35	-			_
aac acc acg gag agg Asn Thr Thr Glu Arg 50				
aac acc agt gtt ggc Asn Thr Ser Val Gly 65	_			

aga Arg	cct Pro	gag Glu	aag Lys	cat His 85	gag Glu	gca Ala	gcc Ala	act Thr	gga Gly 90	gtg Val	gac Asp	acc Thr	atc Ile	tgt Cys 95	acc Thr	288
cac His	cgc Arg	gtt Val	gat Asp 100	ccc Pro	atc Ile	gga Gly	cct Pro	gga Gly 105	ctg Leu	gac Asp	aga Arg	gag Glu	cgg Arg 110	cta Leu	tac Tyr	336
tgg Trp	gag Glu	ctg Leu 115	agc Ser	cag Gln	ctg Leu	acc Thr	aac Asn 120	agc Ser	atc Ile	aca Thr	gag Glu	ctg Leu 125	gga Gly	ccc Pro	tac Tyr	384
acc Thr	ctg Leu 130	gac Asp	agg Arg	gac Asp	agt Ser	ctc Leu 135	tat Tyr	gtc Val	aat Asn	ggc Gly	ttc Phe 140	aac Asn	cct Pro	cgg Arg	agc Ser	432
tct Ser 145	gtg Val	cca Pro	acc Thr	acc Thr	agc Ser 150	act Thr	cct Pro	ggg	acc Thr	tcc Ser 155	aca Thr	gtg Val	cac His	ctg Leu	gca Ala 160	480
acc Thr	tct Ser	ggg Gly	act Thr	cca Pro 165	Ser	tcc Ser	ctg Leu	cct Pro								507
<21	0>	152														
<21		169														
<21	2>	PRT														
<21	3>	Homo	sap	iens												
<40	0>	152														
Met 1	Arq	g Gly	Ser	His 5	: His	His	His	His	His 10	Gly	Ser	Met	Gly	His	Thr	
Glu	Dag															
	PLC	o Gly	Pro 20	Leu	ı Leu	ı Ile	Pro	Phe 25	Thr	Phe	. Asn	Phe	Thr 30	Ile	Thr	
Asr			20					25					30		Thr Phe	
	ı Lei	His 35	20 Tyi	c Gli	ı Glu	ı Asr	Met 40	25 : Gln	n His	Pro	o Gly	Ser 45	30 Arg	, Lys		
Asr	n Len n Th 50	ı His 35 r Thı	20 Tyr	c Glu	ı Glu	ı Asr L Leu 55	Met 40	25 : Glm	n His / Leu	Pro	o Gly 1 Lys 60	Ser 45 Pro	30 Arç	J Lys	Phe	

His	Arg	Val	Asp	Pro	Ile	Gly	Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr
	-		100					105					110		

Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr 115 120 125

Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Arg Ser 130 135 140

Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala 145 150 155 160

Thr Ser Gly Thr Pro Ser Ser Leu Pro 165

<210> 153

<211> 507

<212> DNA

<213> Homo sapiens

<400> 153 aggcagggag gatggagtcc cagaggttgc caggtgcact gtggaggtcc caggagtgct 60 ggtggttggc acagagctcc gagggttgaa gccattgaca tagagactgt ccctgtccag 120 ggtgtagggt cccagctctg tgatgctgtt ggtcagctgg ctcagctccc agtatagccg 180 ctctctgtcc agtccaggtc cgatgggatc aacgcggtgg gtacagatgg tgtccactcc 240 agtggctgcc tcatgcttct caggtctgag caaggtcagt ctgcagccag agtacagagg 300 gccaacactg gtgttcttga acaagggctt gagcagaccc tgcagaaccc tctccgtggt 360 gttgaacttc ctggaaccag ggtgttgcat gttttcctca taatgcaggt tggtgatggt 420 480 aaagttgaaa gtgaatggta tcaggagagg gccaggctct gtgtggccca tggatccgtg 507 atggtgatgg tgatgcgatc ctctcat

<210> 154

<211> 9

<212> PRT

<213> Homo sapiens

<400> 154

Arg Leu Tyr Trp Glu Leu Ser Gln Leu 1 5

<210> 155

<211> 9

<212> PRT

<213> Homo sapiens

<400> 155

Thr Leu Asp Arg Asp Ser Leu Tyr Val

<210> 156

<211> 9

<212> PRT

<213> Homo sapiens

<400> 156

Val Leu Gln Gly Leu Leu Lys Pro Leu 1 5

<210> 157

<211> 9

<212> PRT

<213> Homo sapiens

<400> 157

Gln Leu Thr Asn Ser Ile Thr Glu Leu 1 5

<210> 158

<211> 780

<212> PRT

<213> Homo sapiens

<400> 158

Ala Thr Val Pro Phe Met Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Ala Thr Glu Arg Glu Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg 35 40 45

Asn Ser Ser Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu 50 60

Arg Pro Glu Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr 65 70 75 80

His Arg Pro Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr 85 90 95

Trp Glu Leu Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr 100 105 110

Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser 115 120 125

Ser Met Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly 130 135 140

Thr Ser Gly Thr Pro Ser Ser Ser Pro Ser Pro Thr Ala Ala Gly Pro 145 150 155 160

Leu Leu Met Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr 165 170 175

Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu 180 185 190

Ser Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val 195 200 205

Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys 210 220

Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp 225 230 235

Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser 245 250 255

Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg 260 265 270

Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr 295 Pro Ser Ser Leu Ser Ser Pro Thr Ile Met Ala Gly Pro Leu Leu Val 310 315 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Gly Glu Asp 325 330 Met Gly His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Ile Phe Lys Asn Thr Ser Val Gly Pro Leu 360 Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Ser Glu Lys Asp Gly Ala 375 Ala Thr Gly Val Asp Ala Ile Cys Ile His His Leu Asp Pro Lys Ser 390 395 Pro Gly Leu Asn Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Thr Ser Val Pro Thr Ser Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Phe Ser Leu Pro Ser Pro Ala Thr Ala Gly Pro Leu Leu Val Leu Phe Thr Leu 465 475 Asn Phe Thr Ile Thr Asn Leu Lys Tyr Glu Glu Asp Met His Arg Pro 490 Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Thr Leu Leu 500 505 Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys 520 Arg Leu Thr Leu Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val 530 535 Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys 570 Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly 585

Phe Thr His Trp Ile Pro Val Pro Thr Ser Ser Thr Pro Gly Thr Ser 595 600 605

Thr Val Asp Leu Gly Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr 610 615 620

Ala Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 625 630 635 640

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys
660 665 670

Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu 675 680 685

Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr 690 695 700

His Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr 705 710 715 720

Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr 725 730 735

Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr 740 745 750

Ser Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly 755 760 765

Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr
770 775 780

<210> 159

<211> 780

<212> PRT

<213> Homo sapiens

<400> 159

Ser Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys 35 40 45

Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu

55 60 50 Arg Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys Ser 70 His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr 105 Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser 120 Ser Val Ala Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly 140 Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Ala Val Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr 170 Gly Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Leu Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Ile Ser Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His His Leu Asn Pro Gln Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Gln Leu Ser 245 Gln Met Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg 265 Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu Thr 280 Thr Ser Thr Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr 295 Pro Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Val Pro 310 305 Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met 325 His Arg Pro Gly Ser Arg Lys Phe Asn Ala Thr Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr 360

Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro 390 395 Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His 405 Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu Tyr 425 Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr Pro 435 440 445 Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe 455 Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys 505 Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp 535 Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg 550 555 Glu Gln Leu Tyr Cys Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu 570 565 Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe 580 Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr 600 Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe Pro Gly His Thr 610 615 Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe 645 650 Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys 660 665 Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu

680

685

Arg Pro Glu Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr 690 695 700

His Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr 705 710 715 720

Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr 725 730 735

Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Arg Ser 740 745 750

Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala 755 760 765

Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly His Thr 770 775 780

<210> 160

<211> 624

<212> PRT

<213> Homo sapiens

<400> 160

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Arg Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Thr Pro Leu Phe Lys 35 40 45

Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu 50 55 60

Arg Pro Glu Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr 65 70 75 80

His Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr
85 90 95

Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr
100 105 110

Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Trp Ser 115 120 125

Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala 130 135 140

Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro Val Pro

160 155 150 145 Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asp Leu His Tyr 170 Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu 180 Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu Asp 230 Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser 245 Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg 265 Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly Thr 295 Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Val Pro 310 Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met 325 Arg His Pro Gly Ser Arg Lys Phe Ser Thr Thr Glu Arg Val Leu Gln 345 Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala 375 370 Thr Arg Val Asp Ala Val Cys Thr His Arg Pro Asp Pro Lys Ser Pro 390 Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg His Ser Leu Tyr 425 Val Asn Gly Phe Thr His Gln Ser Ser Met Thr Thr Arg Thr Pro 440 Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser Leu 455

Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn 465 470 475 480

Phe Thr Ile Thr Asn Gln Arg Tyr Glu Glu Asn Met His His Pro Gly 485 490 495

Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Arg 500 505 510

Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg 515 520 525

Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp 530 540

Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg 545 550 555 560

Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu 565 570 575

Leu Gly Pro Tyr Thr Gln Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe 580 580 590

Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala 595 600 605

Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly His Thr 610 620

<210> 161

<211> 468

<212> PRT

<213> Homo sapiens

<400> 161

Ala Thr Gly Pro Val Leu Leu Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Glu Arg Val Leu Gln Gly Leu Leu Met Pro Leu Phe Lys 35 40 45

Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu 50 55 60

Arg Pro Glu Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Val Cys Thr 65 70 75 80

His Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Arg Leu Tyr 85 90 95

Trp Lys Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr 105 Thr Leu Asp Arg His Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser 120 Ser Met Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala 135 140 Thr Ser Arg Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro 150 155 Leu Leu Val Leu Phe Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr 165 170 Glu Glu Asn Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu 180 Arg Val Leu Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp 235 Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Gln Asp Arg 265 Asp Ser Leu Tyr Asn Val Gly Phe Thr Gln Arg Ser Ser Val Pro Thr 275 280 Thr Ser Val Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly Thr 295 Pro Val Ser Lys Pro Gly Pro Ser Ala Ala Ser Pro Leu Leu Val Leu 305 310 Phe Thr Leu Asn Gly Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln 345 Gly Leu Leu Arg Ser Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr 360 Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Thr Ala 375 Thr Gly Val Asp Ala Ile Cys Thr His His Pro Asp Pro Lys Ser Pro 400 Arg Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His

Ü

405 410 415

Asn Ile Thr Glu Leu Gly His Tyr Ala Leu Asp Asn Asp Ser Leu Phe 420 425 430

Gly Thr Pro Thr Val Tyr Leu Gly Ala Ser Lys Thr Pro Ala Ser Ile 450 455 460

Phe Gly Pro Ser 465

<210> 162

<211> 11721

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (1)..(11721)

<223> any x = any amino acid

<400> 162

Ile Arg Pro Val Lys Gly Pro Gln Thr Ser Thr Ser Pro Ala Ser Pro 20 2530

Lys Gly Leu His Thr Gly Gly Thr Lys Arg Met Glu Thr Thr Thr 35 40 45

Ala Leu Lys Thr Thr Thr Thr Ala Leu Lys Thr Thr Ser Arg Ala Thr 50 60

Leu Thr Thr Ser Val Tyr Thr Pro Thr Leu Gly Thr Leu Thr Pro Leu 65 70 75 80

Asn Ala Ser Arg Gln Met Ala Ser Thr Ile Leu Thr Glu Met Met Ile 85 90 95

Thr Thr Pro Tyr Val Phe Pro Asp Val Pro Glu Thr Thr Ser Ser Leu 100 105 110

Ala Thr Ser Leu Gly Ala Glu Thr Ser Thr Ala Leu Pro Arg Thr Thr 115 120 125

Pro Ser Val Leu Asn Arg Glu Ser Glu Thr Thr Ala Ser Leu Val Ser 135 Arg Ser Gly Ala Glu Arg Ser Pro Val Ile Gln Thr Leu Asp Val Ser Ser Ser Glu Pro Asp Thr Thr Ala Ser Trp Val Ile His Pro Ala Glu 170 165 Thr Ile Pro Thr Val Ser Lys Thr Thr Pro Asn Phe Phe His Ser Glu 185 Leu Asp Thr Val Ser Ser Thr Ala Thr Ser His Gly Ala Asp Val Ser 200 Ser Ala Ile Pro Thr Asn Ile Ser Pro Ser Glu Leu Asp Ala Leu Thr 215 Pro Leu Val Thr Ile Ser Gly Thr Asp Thr Ser Thr Thr Phe Pro Thr 235 Leu Thr Lys Ser Pro His Glu Thr Glu Thr Arg Thr Thr Trp Leu Thr 245 His Pro Ala Glu Thr Ser Ser Thr Ile Pro Arg Thr Ile Pro Asn Phe 265 Ser His His Glu Ser Asp Ala Thr Pro Ser Ile Ala Thr Ser Pro Gly 275 280 285 Ala Glu Thr Ser Ser Ala Ile Pro Ile Met Thr Val Ser Pro Gly Ala 295 Glu Asp Leu Val Thr Ser Gln Val Thr Ser Ser Gly Thr Asp Arg Asn 310 315 Met Thr Ile Pro Thr Leu Thr Leu Ser Pro Gly Glu Pro Lys Thr Ile Ala Ser Leu Val Thr His Pro Glu Ala Gln Thr Ser Ser Ala Ile Pro 345 Thr Ser Thr Ile Ser Pro Ala Val Ser Arg Leu Val Thr Ser Met Val Thr Ser Leu Ala Ala Lys Thr Ser Thr Thr Asn Arg Ala Leu Thr Asn 375 380 Ser Pro Gly Glu Pro Ala Thr Thr Val Ser Leu Val Thr His Pro Ala Gln Thr Ser Pro Thr Val Pro Trp Thr Thr Ser Ile Phe Phe His Ser 410 Lys Ser Asp Thr Thr Pro Ser Met Thr Thr Ser His Gly Ala Glu Ser 420 425 Ser Ser Ala Val Pro Thr Pro Thr Val Ser Thr Glu Val Pro Gly Val

440 445 435 Val Thr Pro Leu Val Thr Ser Ser Arg Ala Val Ile Ser Thr Thr Ile 455 Pro Ile Leu Thr Leu Ser Pro Gly Glu Pro Glu Thr Thr Pro Ser Met 470 475 Ala Thr Ser His Gly Glu Glu Ala Ser Ser Ala Ile Pro Thr Pro Thr Val Ser Pro Gly Val Pro Gly Val Val Thr Ser Leu Val Thr Ser Ser 505 Arg Ala Val Thr Ser Thr Thr Ile Pro Ile Leu Thr Phe Ser Leu Gly 520 515 Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Thr Glu Ala 535 Gly Ser Ala Val Pro Thr Val Leu Pro Glu Val Pro Gly Met Val Thr 550 555 Ser Leu Val Ala Ser Ser Arq Ala Val Thr Ser Thr Thr Leu Pro Thr 570 Leu Thr Leu Ser Pro Gly Glu Pro Glu Thr Thr Pro Ser Met Ala Thr 585 590 Ser His Gly Ala Glu Ala Ser Ser Thr Val Pro Thr Val Ser Pro Glu Val Pro Gly Val Val Thr Ser Leu Val Thr Ser Ser Gly Val Asn 615 Ser Thr Ser Ile Pro Thr Leu Ile Leu Ser Pro Gly Glu Leu Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Ala Glu Ala Ser Ser Ala Val Pro Thr Pro Thr Val Ser Pro Gly Val Ser Gly Val Val Thr Pro Leu 665 Val Thr Ser Ser Arg Ala Val Thr Ser Thr Thr Ile Pro Ile Leu Thr Leu Ser Ser Ser Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His 695 690 Gly Val Glu Ala Ser Ser Ala Val Leu Thr Val Ser Pro Glu Val Pro 715 710 Gly Met Val Thr Ser Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr 730 725 Thr Ile Pro Thr Leu Thr Ile Ser Ser Asp Glu Pro Glu Thr Thr Thr 740 745 750

Ser Leu Val Thr His Ser Glu Ala Lys Met Ile Ser Ala Ile Pro Thr 760 Leu Ala Val Ser Pro Thr Val Gln Gly Leu Val Thr Ser Leu Val Thr 775 Ser Ser Gly Ser Glu Thr Ser Ala Phe Ser Asn Leu Thr Val Ala Ser 795 Ser Gln Pro Glu Thr Ile Asp Ser Trp Val Ala His Pro Gly Thr Glu 805 810 Ala Ser Ser Val Val Pro Thr Leu Thr Val Ser Thr Gly Glu Pro Phe 820 825 Thr Asn Ile Ser Leu Val Thr His Pro Ala Glu Ser Ser Ser Thr Leu 840 Pro Arg Thr Thr Ser Arg Phe Ser His Ser Glu Leu Asp Thr Met Pro 850 855 Ser Thr Val Thr Ser Pro Glu Ala Glu Ser Ser Ser Ala Ile Ser Thr 875 Thr Ile Ser Pro Gly Ile Pro Gly Val Leu Thr Ser Leu Val Thr Ser 885 890 Ser Gly Arg Asp Ile Ser Ala Thr Phe Pro Thr Val Pro Glu Ser Pro 900 905 His Glu Ser Glu Ala Thr Ala Ser Trp Val Thr His Pro Ala Val Thr 915 920 925 Ser Thr Thr Val Pro Arg Thr Thr Pro Asn Tyr Ser His Ser Glu Pro 935 Asp Thr Thr Pro Ser Ile Ala Thr Ser Pro Gly Ala Glu Ala Thr Ser 945 950 955 Asp Phe Pro Thr Ile Thr Val Ser Pro Asp Val Pro Asp Met Val Thr Ser Gln Val Thr Ser Ser Gly Thr Asp Thr Ser Ile Thr Ile Pro Thr 985 Leu Thr Leu Ser Ser Gly Glu Pro Glu Thr Thr Thr Ser Phe Ile Thr 1000 Tyr Ser Glu Thr His Thr Ser Ser Ala Ile Pro Thr Leu Pro Val 1010 1015 Ser Pro Gly Ala Ser Lys Met Leu Thr Ser Leu Val Ile Ser Ser 1025 1030 1035 Gly Thr Asp Ser Thr Thr The Pro Thr Leu Thr Glu Thr Pro 1045 1050 Tyr Glu Pro Glu Thr Thr Ala Ile Gln Leu Ile His Pro Ala Glu 1055 1060 1065

Thr	Asn 1070	Thr	Met	Val	Pro	Arg 1075	Thr	Thr	Pro	Lys	Phe 1080	Ser	His	Ser
Lys	Ser 1085	Asp	Thr	Thr	Leu	Pro 1090	Val	Ala	Ile	Thr	Ser 1095	Pro	Gly	Pro
Glu	Ala 1100	Ser	Ser	Ala	Val	Ser 1105	Thr	Thr	Thr	Ile	Ser 1110	Pro	Asp	Met
Ser	Asp 1115	Leu	Val	Thr	Ser	Leu 1120	Val	Pro	Ser	Ser	Gly 1125	Thr	Asp	Thr
Ser	Thr 1130	Thr	Phe	Pro	Thr	Leu 1135	Ser	Glu	Thr	Pro	Tyr 1140	Glu	Pro	Glu
Thr	Thr 1145	Ala	Thr	Trp	Leu	Thr 1150	His	Pro	Ala	Glu	Thr 1155	Ser	Thr	Thr
Val	Ser 1160	Gly	Thr	Ile	Pro	Asn 1165	Phe	Ser	His	Arg	Gly 1170	Ser	Asp	Thr
Ala	Pro 1175	Ser	Met	Val	Thr	Ser 1180	Pro	Gly	Val	Asp	Thr 1185	Arg	Ser	Gly
Val	Pro 1190	Thr	Thr	Thr	Ile	Pro 1195	Pro	Ser	Ile	Pro	Gly 1200	Val	Val	Thr
Ser	Gln 1205	Val	Thr	Ser	Ser	Ala 1210	Thr	Asp	Thr	Ser	Thr 1215	Ala	Ile	Pro
Thr	Leu 1220	Thr	Pro	Ser	Pro	Gly 1225	Glu	Pro	Glu	Thr	Thr 1230	Ala	Ser	Ser
Ala	Thr 1235	His	Pro	Gly	Thr	Gln 1240	Thr	Gly	Phe	Thr	Val 1245	Pro	Ile	Arg
Thr	Val 1250	Pro	Ser	Ser	Glu	Pro 1255	Asp	Thr	Met	Ala	Ser 1260	Trp	Val	Thr
His	Pro 1265									_	Thr 1275		Ser	Ser
Phe	Ser 1280	His	Ser	Ser	Pro	Asp 1285	Ala	Thr	Pro	Val	Met 1290	Ala	Thr	Ser
Pro	Arg 1295	Thr	Glu	Ala	Ser	Ser 1300	Ala	Val	Leu	Thr	Thr 1305	Ile	Ser	Pro
Gly	Ala 1310	Pro	Glu	Met	Val	Thr 1315	Ser	Gln	Ile	Thr	Ser 1320	Ser	Gly	Ala
Ala	Thr 1325	Ser	Thr	Thr	Val	Pro 1330	Thr	Leu	Thr	His	Ser 1335	Pro	Gly	Met
Pro	Glu 1340	Thr	Thr	Ala	Leu	Leu 1345	Ser	Thr	His	Pro	Arg 1350	Thr	Glu	Thr
Ser	Lys	Thr	Phe	Pro	Ala	Ser	Thr	Val	Phe	Pro	Gln	Val	Ser	Glu

	1355					1360					1365			
Thr	Thr 1370		Ser	Leu	Thr	Ile 1375		Pro	Gly	Ala	Glu 1380		Ser	Thr
Ala	Leu 1385		Thr	Gln	Thr	Thr 1390		Ser	Leu	Phe	Thr 1395		Leu	Val
Thr	Gly 1400		Ser	Arg	Val	Asp 1405	Leu	Ser	Pro	Thr	Ala 1410		Pro	Gly
Val	Ser 1415		Lys	Thr	Ala	Pro 1420		Ser	Thr	His	Pro 1425		Thr	Glu
Thr	Ser 1430		Met	Ile	Pro	Thr 1435		Thr	Leu	Ser	Leu 1440		Leu	Leu
Glu	Thr 1445	Thr	Gly	Leu	Leu	Ala 1450	Thr	Ser	Ser	Ser	Ala 1455	Glu	Thr	Ser
Thr	Ser 1460	Thr	Leu	Thr	Leu	Thr 1465	Val	Ser	Pro	Ala	Val 1470	Ser	Gly	Leu
Ser	Ser 1475	Ala	Ser	Ile	Thr	Thr 1480	Asp	Lys	Pro	Gln	Thr 1485	Val	Thr	Ser
Trp	Asn 1490	Thr	Glu	Thr	Ser	Pro 1495	Ser	Val	Thr	Ser	Val 1500	Gly	Pro	Pro
Glu	Phe 1505	Ser	Arg	Thr	Val	Thr 1510	Gly	Thr	Thr	Met	Thr 1515	Leu	Ile	Pro
Ser	Glu 1520	Met	Pro	Thr	Pro	Pro 1525	Lys	Thr	Ser	His	Gly 1530	Glu	Gly	Val
Ser	Pro 1535	Thr	Thr	Ile	Leu	Arg 1540	Thr	Thr	Met	Val	Glu 1545	Ala	Thr	Asn
Leu	Ala 1550	Thr	Thr	Gly	Ser	Ser 1555	Pro	Thr	Val	Ala	Lys 1560	Thr	Thr	Thr
Thr	Phe 1565	Asn	Thr	Leu	Ala	Gly 1570	Ser	Leu	Phe	Thr	Pro 1575	Leu	Thr	Thr
Pro	Gly 1580	Met	Ser	Thr	Leu	Ala 1585	Ser	Glu	Ser	Val	Thr 1590	Ser	Arg	Thr
Ser	Tyr 1595	Asn	His	Arg	Ser	Trp 1600	Ile	Ser	Thr	Thr	Ser 1605	Ser	Tyr	Asn
Arg	Arg 1610	Tyr	Trp	Thr	Pro	Ala 1615	Thr	Ser	Thr	Pro	Val 1620	Thr	Ser	Thr
Phe	Ser 1625	Pro	Gly	Ile	Ser	Thr 1630	Ser	Ser	Ile	Pro	Ser 1635	Ser	Thr	Ala
Ala	Thr 1640	Val	Pro	Phe	Met	Val 1645	Pro	Phe	Thr	Leu	Asn 1650	Phe	Thr	Ile

Thr	Asn 1655	Leu	Gln	Tyr	Glu	Glu 1660	Asp	Met	Arg	His	Pro 1665	Gly	Ser	Arg
Lys	Phe 1670	Asn	Ala	Thr	Glu	Arg 1675	Glu	Leu	Gln	Gly	Leu 1680	Leu	Lys	Pro
Leu	Phe 1685	Arg	Asn	Ser	Ser	Leu 1690	Glu	Tyr	Leu	Tyr	Ser 1695	Gly	Cys	Arg
Leu	Ala 1700		Leu	Arg	Pro	Glu 1705	Lys	Asp	Ser	Ser	Ala 1710	Met	Ala	Val
Asp	Ala 1715		Cys	Thr	His	Arg 1720	Pro	Asp	Pro	Glu	Asp 1725	Leu	Gly	Leu
Asp	Arg 1730		Arg	Leu	Tyr	Trp 1735	Glu	Leu	Ser	Asn	Leu 1740	Thr	Asn	Gly
Ile	Gln 1745		Leu	Gly	Pro	Tyr 1750		Leu	Asp	Arg	Asn 1755	Ser	Leu	Tyr
Val	Asn 1760	_	Phe	Thr	His	Arg 1765		Ser	Met	Pro	Thr 1770	Thr	Ser	Thr
Pro	Gly 1775		Ser	Thr	Val	Asp 1780		Gly	Thr	Ser	Gly 1785	Thr	Pro	Ser
Ser	Ser 1790		Ser	Pro	Thr	Ala 1795		Gly	Pro	Leu	Leu 1800	Met	Pro	Phe
Thr	Leu 1805		Phe	Thr	Ile	Thr 1810		Leu	Gln	Tyr	Glu 1815		Asp	Met
Arg	Arg 1820		Gly	Ser	Arg	Lys 1825		Asn	Thr	Met	Glu 1830	Ser	Val	Leu
Gln	Gly 1835		Leu	Lys	Pro	Leu 1840	Phe	Lys	Asn	Thr	Ser 1845	Val	Gly	Pro
	Tyr 1850		Gly	Cys	Arg	Leu 1855	Thr		Leu		Pro 1860	Glu	Lys	Asp
Gly	Ala 1865		Thr	Gly	Val	Asp 1870		Ile	Cys	Thr	His 1875	Arg	Leu	Asp
Pro	Lys 1880		Pro	Gly	Leu	Asn 1885		Glu	Gln	Leu	Tyr 1890	Trp	Glu	Leu
Ser	Lys 1895		Thr	Asn	Asp	Ile 1900		Glu	Leu	Gly	Pro 1905	Tyr	Thr	Leu
Asp	Arg 1910		. Ser	Leu	Tyr	Val 1915		Gly	Phe	Thr	His 1920	Gln	Ser	Ser
Val	Ser 1925		Thr	Ser	Thr	Pro 1930		Thr	Ser	Thr	Val 1935		Leu	Arg
Thr	Ser 1940		/ Thi	Pro	Ser	Ser 1945		ı Ser	Ser	Pro	Thr 1950		Met	Ala

Ala	Gly 1955	Pro	Leu	Leu	Val	Pro 1960	Phe	Thr	Leu	Asn	Phe 1965	Thr	Ile	Thr
Asn	Leu 1970	Gln	Tyr	Gly	Glu	Asp 1975	Met	Gly	His	Pro	Gly 1980	Ser	Arg	Lys
Phe	Asn 1985	Thr	Thr	Glu	Arg	Val 1990		Gln	Gly	Leu	Leu 1995	Gly	Pro	Ile
Phe	Lys 2000	Asn	Thr	Ser	Val	Gly 2005	Pro	Leu	Tyr	Ser	Gly 2010	Cys	Arg	Leu
Thr	Ser 2015	Leu	Arg	Ser	Glu	Lys 2020		Gly	Ala	Ala	Thr 2025	Gly	Val	Asp
Ala	Ile 2030	Суѕ	Ile	His	His	Leu 2035		Pro	Lys	Ser	Pro 2040	Gly	Leu	Asn
Arg	Glu 2045	Arg	Leu	Tyr	Trp	Glu 2050	Leu	Ser	Gln	Leu	Thr 2055	Asn	Gly	Ile
Lys	Glu 2060	Leu	Gly	Pro	Tyr	Thr 2065	Leu	Asp	Arg	Asn	Ser 2070	Leu	Tyr	Val
Asn	Gly 2075	Phe	Thr	His	Arg	Thr 2080		Val	Pro	Thr	Ser 2085	Ser	Thr	Pro
Gly	Thr 2090	Ser	Thr	Val	Asp	Leu 2095	Gly	Thr	Ser	Gly	Thr 2100	Pro	Phe	Ser
Leu	Pro 2105	Ser	Pro	Ala	Thr	Ala 2110	Gly	Pro	Leu	Leu	Val 2115	Leu	Phe	Thr
Leu	Asn 2120	Phe	Thr	Ile	Thr	Asn 2125		Lys	Tyr	Glu	Glu 2130	Asp	Met	His
Arg	Pro 2135	Gly	Ser	Arg	Lys	Phe 2140	Asn	Thr	Thr	Glu	Arg 2145	Val	Leu	Gln
Thr	Leu 2150		Gly	Pro	Met	Phe 2155		Asn			Val 2160	Gly	Leu	Leu
Tyr	Ser 2165		Cys	Arg	Leu	Thr 2170		Leu	Arg	Ser	Glu 2175	Lys	Asp	Gly
Ala	Ala 2180	Thr	Gly	Val	Asp	Ala 2185		Cys	Thr	His	Arg 2190	Leu	Asp	Pro
Lys	Ser 2195		Gly	Leu	Asp	Arg 2200		Gln	Leu	Tyr	Trp 2205		Leu	Ser
Gln	Leu 2210	Thr	Asn	Gly	Ile	Lys 2215		Leu	Gly	Pro	Tyr 2220	Thr	Leu	Asp
Arg	Asn 2225		Leu	Tyr	Val	Asn 2230		Phe	Thr	His	Trp 2235	Ile	Pro	Val
Pro	Thr	Ser	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Ser

	2240					2245					2250			
Gly	Thr 2255	Pro	Ser	Ser	Leu	Pro 2260	Ser	Pro	Thr	Ala	Ala 2265	Gly	Pro	Leu
Leu	Val 2270	Pro	Phe	Thr	Leu	Asn 2275	Phe	Thr	Ile	Thr	Asn 2280	Leu	Gln	Tyr
Glu	Glu 2285	Asp	Met	His	His	Pro 2290	Gly	Ser	Arg	Lys	Phe 2295	Asn	Thr	Thr
Glu	Arg 2300	Val	Leu	Gln	Gly	Leu 2305	Leu	Gly	Pro	Met	Phe 2310	Lys	Asn	Thr
Ser	Val 2315	Gly	Leu	Leu	Tyr	Ser 2320	Gly	Cys	Arg	Leu	Thr 2325	Leu	Leu	Arg
Ser	Glu 2330	Lys	Asp	Gly	Ala	Ala 2335		Gly	Val	Asp	Ala 2340	Ile	Cys	Thr
His	Arg 2345	Leu	Asp	Pro	Lys	Ser 2350	Pro	Gly	Val	Asp	Arg 2355	Glu	Gln	Leu
Tyr	Trp 2360	Glu	Leu	Ser	Gln	Leu 2365	Thr	Asn	Gly	Ile	Lys 2370	Glu	Leu	Gly
Pro	Tyr 2375	Thr	Leu	Asp	Arg	Asn 2380	Ser	Leu	Tyr	Val	Asn 2385	Gly	Phe	Thr
His	Gln 2390	Thr	Ser	Ala	Pro	Asn 2395	Thr	Ser	Thr	Pro	Gly 2400	Thr	Ser	Thr
Val	Asp 2405	Leu	Gly	Thr	Ser	Gly 2410	Thr	Pro	Ser	Ser	Leu 2415	Pro	Ser	Pro
Thr	Ser 2420	Ala	Gly	Pro	Leu	Leu 2425	Val	Pro	Phe	Thr	Leu 2430	Asn	Phe	Thr
Ile	Thr 2435	Asn	Leu	Gln	Tyr	Glu 2440	Glu	Asp	Met	Arg	His 2445	Pro	Gly	Ser
Arg	Lys 2450	Phe	Asn	Thr	Thr	Glu 2455	Arg	Val	Leu	Gln	Gly 2460	Leu	Leu	Lys
Pro	Leu 2465	Phe	Lys	Ser	Thr	Ser 2470	Val	Gly	Pro	Leu	Tyr 2475	Ser	Gly	Cys
Arg	Leu 2480	Thr	Leu	Leu	Arg	Ser 2485	Glu	Lys	Asp	Gly	Ala 2490	Ala	Thr	Gly
Val	Asp 2495		Ile	Cys	Thr	His 2500	Arg	Leu	Asp	Pro	Lys 2505	Ser	Pro	Gly
Val	Asp 2510	Arg	Glu	Gln	Leu	Tyr 2515	Trp	Glu	Leu	Ser	Gln 2520	Leu	Thr	Asn
Gly	Ile 2525	Lys	Glu	Leu	Gly	Pro 2530	Tyr	Thr	Leu	Asp	Arg 2535	Asn	Ser	Leu

Tyr	Val 2540	Asn	Gly	Phe	Thr	His 2545	Gln	Thr	Ser	Ala	Pro 2550	Asn	Thr	Ser
Thr	Pro 2555	Gly	Thr	Ser	Thr	Val 2560	Asp	Leu	Gly	Thr	Ser 2565	Gly	Thr	Pro
Ser	Ser 2570	Leu	Pro	Ser		Thr 2575		Ala	Gly	Pro	Leu 2580	Leu	Val	Pro
Phe	Thr 2585	Leu	Asn	Phe	Thr	Ile 2590	Thr	Asn	Leu	Gln	Tyr 2595	Glu	Glu	Asp
Met	His 2600		Pro	Gly	Ser	Arg 2605		Phe	Asn	Thr	Thr 2610	Glu	Arg	Val
Leu	Gln 2615	Gly	Leu	Leu	Gly	Pro 2620	Met	Phe	Lys	Asn	Thr 2625	Ser	Val	Gly
Leu	Leu 2630		Ser	Gly	Cys	Arg 2635		Thr	Leu	Leu	Arg 2640	Pro	Glu	Lys
Asn	Gly 2645		Ala	Thr	Gly	Met 2650		Ala	Ile	Cys	Ser 2655	His	Arg	Leu
Asp	Pro 2660	Lys	Ser	Pro	Gly	Leu 2665		Arg	Glu	Gln	Leu 2670	Tyr	Trp	Glu
Leu	Ser 2675		Leu	Thr	His	Gly 2680		Lys	Glu	Leu	Gly 2685		Tyr	Thr
Leu	Asp 2690		Asn	Ser	Leu	Tyr 2695		Asn	Gly	Phe	Thr 2700	His	Arg	Ser
Ser	Val 2705		Pro	Thr	Ser	Thr 2710		Gly	Thr	Ser	Thr 2715		Asp	Leu
Gly	Thr 2720		Gly	Thr	Pro	Ser 2725		Leu	Pro	Ser	Pro 2730		Thr	Ala
Val	Pro 2735		Leu	Val	Pro	Phe 2740		Leu	Asn	Phe	Thr 2745	Ile	Thr	Asn
Leu	Gln 2750	_	Gly	Glu	Asp	Met 2755		His	Pro	Gly	Ser 2760		Lys	Phe
Asn	Thr 2765		Glu	Arg	Val	Leu 2770		Gly	Leu	Leu	Gly 2775		Leu	Phe
Lys	Asn 2780		Ser	Val	Gly	Pro 2785		Tyr	Ser	Gly	Cys 2790		Leu	Ile
Ser	Leu 2795		Ser	Glu	Lys	Asp 2800		Ala	Ala	Thr	Gly 2805	Val	Asp	Ala
Ile	Cys 2810		His	His	Leu	Asn 2815		Gln	Ser	Pro	Gly 2820		Asp	Arg
Glu	Gln 2825		Tyr	Trp	Gln	Leu 2830		Gln	Met	Thr	Asn 2835	Gly	Ile	Lys

Glu	Leu 2840	Gly	Pro	Tyr	Thr	Leu 2845	Asp	Arg	Asn	Ser	Leu 2850	Tyr	Val	Asn
Gly	Phe 2855	Thr	His	Arg	Ser	Ser 2860		Leu	Thr	Thr	Ser 2865	Thr	Pro	Trp
Thr	Ser 2870	Thr	Val	Asp	Leu	Gly 2875	Thr	Ser	Gly	Thr	Pro 2880	Ser	Pro	Val
Pro	Ser 2885	Pro	Thr	Thr	Ala	Gly 2890	Pro	Leu	Leu	Val	Pro 2895	Phe	Thr	Leu
Asn	Phe 2900	Thr	Ile	Thr	Asn	Leu 2905	Gln	Tyr	Glu	Glu	Asp 2910	Met	His	Arg
Pro	Gly 2915	Ser	Arg	Lys	Phe	Asn 2920	Ala	Thr	Glu	Arg	Val 2925	Leu	Gln	Gly
Leu	Leu 2930	Ser	Pro	Ile	Phe	Lys 2935		Ser	Ser	Val	Gly 2940	Pro	Leu	Tyr
Ser	Gly 2945	Cys	Arg	Leu	Thr	Ser 2950	Leu	Arg	Pro	Glu	Lys 2955	Asp	Gly	Ala
Ala	Thr 2960	Gly	Met	Asp	Ala	Val 2965	Cys	Leu	Tyr	His	Pro 2970	Asn	Pro	Lys
Arg	Pro 2975	Gly	Leu	Asp	Arg	Glu 2980	Gln	Leu	Tyr	Trp	Glu 2985	Leu	Ser	Gln
Leu	Thr 2990	His	Asn	Ile	Thr	Glu 2995	Leu	Gly	Pro	Tyr	Ser 3000	Leu	Asp	Arg
Asp	Ser 3005	Leu	Tyr	Val	Asn	Gly 3010	Phe	Thr	His	Gln	Asn 3015	Ser	Val	Pro
Thr	Thr 3020	Ser	Thr	Pro	Gly	Thr 3025	Ser	Thr	Val	Tyr	Trp 3030	Ala	Thr	Thr
Gly	Thr 3035	Pro	Ser	Ser	Phe	Pro 3040	_				Pro 3045	_	Pro	Leu
Leu	Ile 3050	Pro	Phe	Thr	Phe	Asn 3055	Phe	Thr	Ile	Thr	Asn 3060	Leu	His	Tyr
Glu	Glų 3065	Asn	Met	Gln	His	Pro 3070	Gly	Ser	Arg	Lys	Phe 3075	Asn	Thr	Thr
Glu	Arg 3080	Val	Leu	Gln	Gly	Leu 3085	Leu	Lys	Pro	Leu	Phe 3090	Lys	Asn	Thr
Ser	Val 3095	Gly	Pro	Leu	Tyr	Ser 3100	Gly	Cys	Arg	Leu	Thr 3105	Ser	Leu	Arg
Pro	Glu 3110	Lys	Asp	Gly	Ala	Ala 3115	Thr	Gly	Met	Asp	Ala 3120	Val	Cys	Leu
Tyr	His	Pro	Asn	Pro	Lys	Arg	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu

	3125					3130					3135			
Tyr	Cys 3140		Leu	Ser	Gln	Leu 3145		His	Asn	Ile	Thr 3150		Leu	Gly
Pro	Tyr 3155		Leu	Asp	Arg	Asp 3160		Leu	Tyr ,	Val	Asn 3165		Phe	Thr
His	Gln 3170		Ser	Val	Pro	Thr 3175		Ser	Thr	Pro	Gly 3180		Ser	Thr
Val	Tyr 3185		Ala	Thr	Thr	Gly 3190		Pro	Ser	Ser	Phe 3195		Gly	His
Thr	Glu 3200		Gly	Pro	Leu	Leu 3205		Pro	Phe	Thr	Phe 3210	Asn	Phe	Thr
Ile	Thr 3215		Leu	His	Tyr	Glu 3220		Asn	Met	Gln	His 3225		Gly	Ser
Arg	Lys 3230		Asn	Thr	Thr	Glu 3235	Arg	Val	Leu	Gln	Gly 3240	Leu	Leu	Lys
Pro	Leu 3245	Phe	Lys	Asn	Thr	Ser 3250	Val	Gly	Pro	Leu	Tyr 3255	Ser	Gly	Cys
Arg	Leu 3260		Leu	Leu	Arg	Pro 3265		Lys	His	Glu	Ala 3270	Ala	Thr	Gly
Val	Asp 3275	Thr	Ile	Cys	Thr	His 3280	Arg	Val	Asp	Pro	Ile 3285	Gly	Pro	Gly
Leu	Asp 3290	Arg	Glu	Arg	Leu	Tyr 3295	Trp	Glu	Leu	Ser	Gln 3300	Leu	Thr	Asn
Ser	Ile 3305	Thr	Glu	Leu	Gly	Pro 3310	Tyr	Thr	Leu	Asp	Arg 3315	Asp	Ser	Leu
Tyr	Val 3320	Asn	Gly	Phe	Asn	Pro 3325	Arg	Ser	Ser	Val	Pro 3330	Thr	Thr	Ser
Thr	Pro 3335	Gly	Thr	Ser	Thr	Val 3340	His	Leu	Ala	Thr	Ser 3345	Gly	Thr	Pro
Ser	Ser 3350	Leu	Pro	Gly	His	Thr 3355	Ala	Pro	Val	Pro	Leu 3360	Leu	Ile	Pro
Phe	Thr 3365	Leu	Asn	Phe	Thr	Ile 3370	Thr	Asn	Leu	His	Tyr 3375	Glu	Glu	Asn
Met	Gln 3380	His	Pro	Gly	Ser	Arg 3385	Lys	Phe	Asn	Thr	Thr 3390	Glu	Arg	Val
Leu	Gln 3395	Gly	Leu	Leu	Lys	Pro 3400	Leu	Phe	Lys	Asn	Thr 3405	Ser	Val	Gly
Pro	Leu 3410	Tyr	Ser	Gly	Cys	Arg 3415	Leu	Thr	Leu	Leu	Arg 3420	Pro	Glu	Lys

His	Glu 3425	Ala	Ala	Thr	Gly	Val 3430		Thr	Ile	Cys	Thr 3435	His	Arg	Val
Asp	Pro 3440	Ile	Gly	Pro	Gly	Leu 3445		Arg	Glu	Xaa	Leu 3450	Tyr	Trp	Glu
Leu	Ser 3455	Xaa	Leu	Thr	Xaa	Xaa 3460		Xaa	Glu	Leu	Gly 3465	Pro	Tyr	Xaa
Leu	Asp 3470	Arg	Xaa	Ser	Leu	Tyr 3475	Val	Asn	Gly	Phe	Xaa 3480	Xaa	Xaa	Xaa
Xaa	Xaa 3485	Xaa	Xaa	Thr	Ser	Thr 3490		Gly	Thr	Ser	Xaa 3495		Xaa	Leu
Xaa	Thr 3500	Ser	Gly	Thr	Pro	Xaa 3505	Xaa	Xaa	Pro	Xaa	Xaa 3510	Thr	Ser	Ala
Gly	Pro 3515	Leu	Leu	Val	Pro	Phe 3520	Thr	Leu	Asn	Phe	Thr 3525	Ile	Thr	Asn
Leu	Gln 3530	Tyr	Glu	Glu	Asp	Met 3535		His	Pro	Gly	Ser 3540	Arg	Lys	Phe
Asn	Thr 3545	Thr	Glu	Arg	Val	Leu 3550	Gln	Gly	Leu	Leu	Gly 3555	Pro	Met	Phe
Lys	Asn 3560	Thr	Ser	Val	Gly	Leu 3565	Leu	Tyr	Ser	Gly	Cys 3570	Arg	Leu	Thr
Leu	Leu 3575	Arg	Pro	Glu	Lys	Asn 3580	Gly	Ala	Ala	Thr	Gly 3585	Met	Asp	Ala
Ile	Cys 3590	Ser	His	Arg	Leu	Asp 3595	Pro	Lys	Ser	Pro	Gly 3600	Leu	Asp	Arg
Glu	Gln 3605	Leu	Tyr	Trp	Glu	Leu 3610	Ser	Gln	Leu	Thr	His 3615	Gly	Ile	Lys
Glu	Leu 3620	Gly	Pro	Tyr	Thr	Leu 3625	Asp	Arg	Asn	Ser	Leu 3630	Tyr	Val	Asn
Gly	Phe 3635	Thr	His	Arg	Ser	Ser 3640	Val	Ala	Pro	Thr	Ser 3645	Thr	Pro	Gly
Thr	Ser 3650	Thr	Val	Asp	Leu	Gly 3655	Thr	Ser	Gly	Thr	Pro 3660	Ser	Ser	Leu
Pro	Ser 3665	Pro	Thr	Thr	Ala	Val 3670	Pro	Leu	Leu	Val	Pro 3675	Phe	Thr	Leu
Asn	Phe 3680	Thr	Ile	Thr	Asn	Leu 3685	Gln	Tyr	Gly	Glu	Asp 3690	Met	Arg	His
Pro	Gly 3695	Ser	Arg	Lys	Phe	Asn 3700	Thr	Thr	Glu	Arg	Val 3705	Leu	Gln	Gly
Leu	Leu 3710	Gly	Pro	Leu	Phe	Lys 3715	Asn	Ser	Ser	Val	Gly 3720	Pro	Leu	Tyr

Ser	Gly 3725	Cys	Arg	Leu	Ile	Ser 3730	Leu	Arg	Ser	Glu	Lys 3735	Asp	Gly	Ala
Ala	Thr 3740	Gly	Val	Asp	Ala	Ile 3745	_	Thr	His	His	Leu 3750	Asn	Pro	Gln
Ser	Pro 3755	Gly	Leu	Asp	Arg	Glu 3760	Gln	Leu	Tyr	Trp	Gln 3765	Leu	Ser	Gln
Met	Thr 3770	Asn	Gly	Ile	Lys	Glu 3775	Leu	Gly	Pro	Tyr	Thr 3780	Leu	Asp	Arg
Asn	Ser 3785	Leu	Tyr	Val	Asn	Gly 3790	Phe	Thr	His	Arg	Ser 3795	Ser	Gly	Leu
Thr	Thr 3800	Ser	Thr	Pro	Trp	Thr 3805	Ser	Thr	Val	Asp	Leu 3810	Gly	Thr	Ser
Gly	Thr 3815	Pro	Ser	Pro	Val	Pro 3820	Ser	Pro	Thr	Thr	Ala 3825	Gly	Pro	Leu
Leu	Val 3830	Pro	Phe	Thr	Leu	Asn 3835	Phe	Thr	Ile	Thr	Asn 3840	Leu	Gln	Tyr
Glu	Glu 3845	Asp	Met	His	Arg	Pro 3850	Gly	Ser	Arg	Lys	Phe 3855	Asn	Ala	Thr
Glu	Arg 3860	Val	Leu	Gln	Gly	Leu 3865	Leu	Ser	Pro	Ile	Phe 3870	Lys	Asn	Ser
Ser	Val 3875	Gly	Pro	Leu	Tyr	Ser 3880	Gly	Cys	Arg	Leu	Thr 3885	Ser	Leu	Arg
Pro	Glu 3890	Lys	Asp	Gly	Ala	Ala 3895	Thr	Gly	Met	Asp	Ala 3900	Val	Суѕ	Leu
Tyr	His 3905	Pro	Asn	Pro	Lys	Arg 3910	Pro	Gly	Leu	Asp	Arg 3915	Glu	Gln	Leu
Tyr	Trp 3920					Leu 3925					Thr 3930	Glu	Leu	Gly
Pro	Tyr 3935	Ser	Leu	Asp	Arg	Asp 3940	Ser	Leu	Tyr	Val	Asn 3945	Gly	Phe	Thr
His	Gln 3950	Ser	Ser	Met	Thr	Thr 3955	Thr	Arg	Thr	Pro	Asp 3960	Thr	Ser	Thr
Met	His 3965	Leu	Ala	Thr	Ser	Arg 3970	Thr	Pro	Ala	Ser	Leu 3975	Ser	Gly	Pro
Thr	Thr 3980	Ala	Ser	Pro	Leu	Leu 3985	Val	Leu	Phe	Thr	Ile 3990	Asn	Суѕ	Thr
Ile	Thr 3995	Asn	Leu	Gln	Tyr	Glu 4000	Glu	Asp	Met	Arg	Arg 4005	Thr	Gly	Ser
Arg	Lys	Phe	Asn	Thr	Met	Glu	Ser	Val	Leu	Gln	Gly	Leu	Leu	Lys

	4010					4015					4020			
Pro	Leu 4025	Phe	Lys	Asn	Thr	Ser 4030	Val	Gly	Pro	Leu	Tyr 4035	Ser	Gly	Cys
Arg	Leu 4040	Thr	Leu	Leu	Arg	Pro 4045	Lys	Lys	Asp	Gly	Ala 4050	Ala	Thr	Gly
Val	Asp 4055	Ala	Ile	Cys	Thr	His 4060	Arg	Leu	Asp	Pro	Lys 4065	Ser	Pro	Gly
Leu	Asn 4070	Arg	Glu	Gln	Leu	Tyr 4075	Trp	Glu	Leu	Ser	Lys 4080	Leu	Thr	Asn
Asp	Ile 4085	Glu	Glu	Leu	Gly	Pro 4090	Tyr	Thr	Leu	Asp	Arg 4095	Asn	Ser	Leu
Tyr	Val 4100	Asn	Gly	Phe	Thr	His 4105	Gln	Ser	Ser	Val	Ser 4110	Thr	Thr	Ser
Thr	Pro 4115	Gly	Thr	Ser	Thr	Val 4120	Asp	Leu	Arg	Thr	Ser 4125	Gly	Thr	Pro
Ser	Ser 4130	Leu	Ser	Ser	Pro	Thr 4135	Ile	Met	Xaa	Xaa	Xaa 4140	Pro	Leu	Leu
Xaa	Pro 4145	Phe	Thr	Leu	Asn	Phe 4150	Thr	Ile	Thr	Asn	Leu 4155	Xaa	Tyr	Glu
Glu	Xaa 4160	Met	Xaa	Xaa	Pro	Gly 4165	Ser	Arg	Lys	Phe	Asn 4170	Thr	Thr	Glu
Arg	Val 4175	Leu	Gln	Gly	Leu	Leu 4180	Arg	Pro	Leu	Phe	Lys 4185	Asn	Thr	Ser
Val	Ser 4190	Ser	Leu	Tyr	Ser	Gly 4195	Cys	Arg	Leu	Thr	Leu 4200	Leu	Arg	Pro
Glu	Lys 4205	Asp	Gly	Ala	Ala	Thr 4210	Arg	Val	Asp	Ala	Ala 4215	Cys	Thr	Tyr
Arg	Pro 4220	Asp	Pro	Lys	Ser	Pro 4225	Gly	Leu	Asp	Arg	Glu 4230	Gln	Leu	Tyr
Trp	Glu 4235		Ser	Gln	Leu	Thr 4240	His	Ser	Ile	Thr	Glu 4245	Leu	Gly	Pro
Tyr	Thr 4250	Leu	Asp	Arg	Val	Ser 4255	Leu	Tyr	Val	Asn	Gly 4260		Asn	Pro
Arg	Ser 4265	Ser	Val	Pro	Thr	Thr 4270	Ser	Thr	Pro	Gly	Thr 4275	Ser	Thr	Val
His	Leu 4280		Thr	Ser	Gly	Thr 4285	Pro	Ser	Ser	Leu	Pro 4290	Gly	His	Thr
Xaa	Xaa 4295	Xaa	Pro	Leu	Leu	Xaa 4300	Pro	Phe	Thr	Leu	Asn 4305	Phe	Thr	Ile

Thr	Asn 4310	Leu	Xaa	Tyr	Glu	Glu 4315	Xaa	Met	Xaa	Xaa	Pro 4320	Gly	Ser	Arg
Lys	Phe 4325	Asn	Thr	Thr	Glu	Arg 4330	Val	Leu	Gln	Gly	Leu 4335	Leu	Lys	Pro
Leu	Phe 4340	Arg	Asn	Ser	Ser	Leu 4345	Glu	Tyr	Leu	Tyr	Ser 4350	Gly	Cys	Arg
Leu	Ala 4355	Ser	Leu	Arg	Pro	Glu 4360	Lys	Asp	Ser	Ser	Ala 4365	Met	Ala	Val
Asp	Ala 4370	Ile	Cys	Thr	His	Arg 4375	Pro	Asp	Pro	Glu	Asp 4380	Leu	Gly	Leu
Asp	Arg 4385	Glu	Arg	Leu	Tyr	Trp 4390	Glu	Leu	Ser	Asn	Leu 4395	Thr	Asn	Gly
Ile	Gln 4400	Glu	Leu	Gly	Pro	Tyr 4405	Thr	Leu	Asp	Arg	Asn 4410	Ser	Leu	Tyr
Val	Asn 4415	Gly	Phe	Thr	His	Arg 4420	Ser	Ser	Phe	Leu	Thr 4425	Thr	Ser	Thr
Pro	Trp 4430	Thr	Ser	Thr	Val	Asp 4435	Leu	Gly	Thr	Ser	Gly 4440	Thr	Pro	Ser
Pro	Val 4445	Pro	Ser	Pro	Thr	Thr 4450	Ala	Gly	Pro	Leu	Leu 4455	Val	Pro	Phe
Thr	Leu 4460	Asn	Phe	Thr	Ile	Thr 4465	Asn	Leu	Gln	Tyr	Glu 4470	Glu	Asp	Met
His	Arg 4475	Pro	Gly	Ser	Arg	Arg 4480	Phe	Asn	Thr	Thr	Glu 4485	Arg	Val	Leu
Gln	Gly 4490	Leu	Leu	Thr	Pro	Leu 4495	Phe	Lys	Asn	Thr	Ser 4500	Val	Gly	Pro
	4490	Ser	Gly	Cys	Arg	4495 Leu	Thr	Leu	Leu	Arg				
Leu	4490 Tyr 4505	Ser	Gly	Cys	Arg	4495 Leu 4510	Thr	Leu	Leu	Arg	4500 Pro	Glu	Lys	Gln
Leu Glu	4490 Tyr 4505 Ala 4520	Ser Ala	Gly	Cys	Arg Val	4495 Leu 4510 Asp 4525	Thr Thr	Leu Ile	Leu Cys	Arg Thr	4500 Pro 4515 His	Glu Arg	Lys Val	Gln Asp
Leu Glu Pro	4490 Tyr 4505 Ala 4520 Ile	Ser Ala Gly	Gly Thr Pro	Cys Gly Gly	Arg Val Leu	A495 Leu 4510 Asp 4525 Asp 4540	Thr Thr Arg	Leu Ile Glu	Leu Cys Arg	Arg Thr Leu	4500 Pro 4515 His 4530	Glu Arg Trp	Lys Val Glu	Gln Asp Leu
Leu Glu Pro Ser	4490 Tyr 4505 Ala 4520 Ile 4535 Gln 4550	Ser Ala Gly Leu	Gly Thr Pro	Cys Gly Gly Asn	Arg Val Leu Ser	4495 Leu 4510 Asp 4525 Asp 4540 Ile 4555	Thr Thr Arg	Leu Ile Glu Glu	Leu Cys Arg Leu	Arg Thr Leu Gly	4500 Pro 4515 His 4530 Tyr 4545 Pro	Glu Arg Trp	Lys Val Glu Thr	Gln Asp Leu Leu
Leu Glu Pro Ser Asp	4490 Tyr 4505 Ala 4520 Ile 4535 Gln 4550 Arg	Ser Ala Gly Leu Asp	Gly Thr Pro Thr	Cys Gly Gly Asn Leu	Arg Val Leu Ser	Asp 4525 Asp 4540 Ile 4555 Val 4570	Thr Thr Arg Thr	Leu Ile Glu Glu	Leu Cys Arg Leu Phe	Arg Thr Leu Gly Asn	4500 Pro 4515 His 4530 Tyr 4545 Pro 4560	Glu Arg Trp Tyr	Lys Val Glu Thr	Gln Asp Leu Leu Ser
Leu Glu Pro Ser Asp	1490 Tyr 4505 Ala 4520 Ile 4535 Gln 4550 Arg 4565 Pro 4580	Ser Ala Gly Leu Asp	Gly Thr Pro Thr Ser	Cys Gly Gly Asn Leu Ser	Arg Val Leu Ser Tyr	A495 Leu 4510 Asp 4525 Asp 4540 Ile 4555 Val 4570 Pro 4585	Thr Arg Thr Asn Gly	Leu Ile Glu Glu Thr	Leu Cys Arg Leu Phe Ser	Arg Thr Leu Gly Asn	4500 Pro 4515 His 4530 Tyr 4545 Pro 4560 Pro 4575	Glu Arg Trp Tyr Trp	Lys Val Glu Thr Ser	Gln Asp Leu Leu Ser

Pro	Leu 4610	Leu	Ile	Pro	Phe	Thr 4615		Asn	Phe	Thr	Ile 4620		Asp	Leu
His	Tyr 4625	Glu	Glu	Asn	Met	Gln 4630		Pro	Gly	Ser	Arg 4635		Phe	Asn
Thr	Thr 4640	Glu	Arg	Val	Leu	Gln 4645		Leu	Leu	Lys	Pro 4650		Phe	Lys
Ser	Thr 4655	Ser	Val	Gly	Pro	Leu 4660		Ser	Gly	Cys	Arg 4665	Leu	Thr	Leu
Leu	Arg 4670	Pro	Glu	Lys	His	Gly 4675	Ala	Ala	Thr	Gly	Val 4680		Ala	Ile
Cys	Thr 4685	Leu	Arg	Leu	Asp	Pro 4690		Gly	Pro	Gly	Leu 4695	_	Arg	Glu
Arg	Leu 4700	Tyr	Trp	Glu	Leu	Ser 4705	Gln	Leu	Thr	Asn	Ser 4710	Val	Thr	Glu
Leu	Gly 4715	Pro	Tyr	Thr	Leu	Asp 4720		Asp	Ser	Leu	Tyr 4725	Val	Asn	Gly
Phe	Thr 4730	His	Arg	Ser	Ser	Val 4735	Pro	Thr	Thr	Ser	Ile 4740	Pro	Gly	Thr
Ser	Ala 4745	Val	His	Leu	Glu	Thr 4750	Ser	Gly	Thr	Pro	Ala 4755	Ser	Leu	Pro
Gly	His 4760	Thr	Ala	Pro	Gly	Pro 4765	Leu	Leu	Val	Pro	Phe 4770	Thr	Leu	Asn
Phe	Thr 4775	Ile	Thr	Asn	Leu	Gln 4780	Tyr	Glu	Glu	Asp	Met 4785	Arg	His	Pro
Gly	Ser 4790	Arg	Lys	Phe	Ser	Thr 4795	Thr	Glu	Arg	Val	Leu 4800	Gln	Gly	Leu
Leu	Lys 4805		Leu		Lys	Asn 4810		Ser	Val	Ser	Ser 4815	Leu	Tyr	Ser
Gly	Cys 4820	Arg	Leu	Thr	Leu	Leu 4825	Arg	Pro	Glu	Lys	Asp 4830	Gly	Ala	Ala
Thr	Arg 4835	Val	Asp	Ala	Val	Cys 4840	Thr	His	Arg	Pro	Asp 4845	Pro	Lys	Ser
Pro	Gly 4850	Leu	Asp	Arg	Glu	Arg 4855	Leu	Tyr	Trp	Lys	Leu 4860	Ser	Gln	Leu
Thr	His 4865	Gly	Ile	Thr	Glu	Leu 4870	Gly	Pro	Tyr	Thr	Leu 4875	Asp	Arg	His
Ser	Leu 4880	Tyr	Val	Asn	Gly	Phe 4885	Thr	His	Gln	Ser	Ser 4890	Met	Thr	Thr
Thr	Arg	Thr	Pro	Asp	Thr	Ser	Thr	Met	His	Leu	Ala	Thr	Ser	Arg

	4895					4900	1				4905			
Thr	Pro 4910		Ser	Leu	Ser	Gly 4915		Thr	Thr	Ala	Ser 4920		Leu	Leu
Val	Leu 4925		Thr	Ile	Asn	Phe 4930		Ile	Thr	Asn	Gln 4935	_	Tyr	Glu
Glu	Asn 4940		His	His	Pro	Gly 4945		Arg	Lys	Phe	Asn 4950		Thr	Glu
Arg	Val 4955	Leu	Gln	Gly	Leu	Leu 4960		Pro	Val	Phe	Lys 4965		Thr	Ser
Val	Gly 4970	Pro	Leu	Tyr	Ser	Gly 4975		Arg	Leu	Thr	Leu 4980		Arg	Pro
Lys	Lys 4985		Gly	Ala	Ala	Thr 4990		Val	Asp	Ala	Ile 4995		Thr	Tyr
Arg	Pro 5000	Asp	Pro	Lys	Ser	Pro 5005		Leu	Asp	Arg	Glu 5010		Leu	Tyr
Trp	Glu 5015	Leu	Ser	Gln	Leu	Thr 5020		Ser	Ile	Thr	Glu 5025		Gly	Pro
Tyr	Thr 5030	Gln	Asp	Arg	Asp	Ser 5035		Tyr	Val	Asn	Gly 5040		Thr	His
Arg	Ser 5045	Ser	Val	Pro	Thr	Thr 5050		Ile	Pro	Gly	Thr 5055	Ser	Ala	Val
His	Leu 5060	Glu	Thr	Ser	Gly	Thr 5065	Pro	Ala	Ser	Leu	Pro 5070	Gly	His	Thr
Ala	Pro 5075	Gly	Pro	Leu	Leu	Val 5080	Pro	Phe	Thr	Leu	Asn 5085	Phe	Thr	Ile
Thr	Asn 5090	Leu	Gln	Tyr	Glu	Glu 5095	Asp	Met	Arg	His	Pro 5100	Gly	Ser	Arg
Lys	Phe 5105	Asn	Thr	Thr	Glu	Arg 5110	Val	Leu	Gln	Gly	Leu 5115	Leu	Lys	Pro
Leu	Phe 5120	Lys	Ser	Thr	Ser	Val 5125	Gly	Pro	Leu	Tyr	Ser 5130	Gly	Cys	Arg
Leu	Thr 5135	Leu	Leu	Arg	Pro	Glu 5140	Lys	Arg	Gly	Ala	Ala 5145	Thr	Gly	Val
Asp	Thr 5150	Ile	Cys	Thr	His	Arg 5155	Leu	Asp	Pro	Leu	Asn 5160	Pro	Gly	Leu
Asp	Arg 5165	Glu	Gln	Leu	Tyr	Trp 5170	Glu	Leu	Ser	Lys	Leu 5175	Thr	Arg	Gly
Ile	Ile 5180	Glu	Leu	Gly	Pro	Tyr 5185	Leu	Leu	Asp	Arg	Gly 5190	Ser	Leu	Tyr

Val	Asn 5195	Gly	Phe	Thr	His	Arg 5200	Thr	Ser	Val	Pro	Thr 5205	Thr	Ser	Thr
Pro	Gly 5210	Thr	Ser	Thr	Val	Asp 5215	Leu	Gly	Thr	Ser	Gly 5220	Thr	Pro	Phe
Ser	Leu 5225	Pro	Ser	Pro	Ala	Xaa 5230		Xaa	Pro	Leu	Leu 5235		Pro	Phe
Thr	Leu 5240	Asn	Phe	Thr	Ile	Thr 5245	Asn	Leu	Xaa	Tyr	Glu 5250	Glu	Xaa	Met
Xaa	Xaa 5255	Pro	Gly	Ser	Arg	Lys 5260		Asn	Thr	Thr	Glu 5265	Arg	Val	Leu
Gln	Thr 5270	Leu	Leu	Gly	Pro	Met 5275	Phe	Lys	Asn	Thr	Ser 5280	Val	Gly	Leu
Leu	Tyr 5285	Ser	Gly	Cys	Arg	Leu 5290	Thr	Leu	Leu	Arg	Ser 5295	Glu	Lys	Asp
Gly	Ala 5300	Ala	Thr	Gly	Val	Asp 5305	Ala	Ile	Cys	Thr	His 5310	Arg	Leu	Asp
Pro	Lys 5315	Ser	Pro	Gly	Val	Asp 5320	Arg	Glu	Gln	Leu	Tyr 5325	Trp	Glu	Leu
Ser	Gln 5330	Leu	Thr	Asn	Gly	Ile 5335	Lys	Glu	Leu	Gly	Pro 5340	Tyr	Thr	Leu
Asp	Arg 5345	Asn	Ser	Leu	Tyr	Val 5350	Asn	Gly	Phe	Thr	His 5355	Trp	Ile	Pro
	5345				_	5350								
Val	5345 Pro 5360	Thr	Ser	Ser	Thr	5350 Pro 5365	Gly	Thr	Ser	Thr	5355 Val	Asp	Leu	Gly
Val	5345 Pro 5360 Gly 5375	Thr Thr	Ser Pro	Ser Ser	Thr	5350 Pro 5365 Pro 5380	Gly Ser Asn	Thr Ser Phe	Ser Pro	Thr Thr	5355 Val 5370 Thr	Asp	Leu Gly	Gly Pro
Val Ser Leu	5345 Pro 5360 Gly 5375 Leu 5390	Thr Thr Val	Ser Pro	Ser Ser Phe	Thr Leu Thr	5350 Pro 5365 Pro 5380 Leu 5395	Gly Ser Asn	Thr Ser Phe	Ser Pro Thr	Thr Thr Ile	5355 Val 5370 Thr 5385 Thr	Asp Ala Asn	Leu Gly Leu	Gly Pro Lys
Val Ser Leu Tyr	5345 Pro 5360 Gly 5375 Leu 5390 Glu 5405	Thr Thr Val Glu	Ser Pro Pro	Ser Ser Phe	Thr Leu Thr	5350 Pro 5365 Pro 5380 Leu 5395 Cys 5410	Gly Ser Asn Pro	Thr Ser Phe Gly	Ser Pro Thr	Thr Thr Ile Arg	5355 Val 5370 Thr 5385 Thr 5400 Lys	Asp Ala Asn	Leu Gly Leu Asn	Gly Pro Lys Thr
Val Ser Leu Tyr	5345 Pro 5360 Gly 5375 Leu 5390 Glu 5405	Thr Thr Val Glu	Ser Pro Pro Asp	Ser Ser Phe Met	Thr Leu Thr His	5350 Pro 5365 Pro 5380 Leu 5395 Cys 5410 Ser 5425	Gly Ser Asn Pro	Thr Ser Phe Gly Leu	Ser Pro Thr Ser	Thr Thr Ile Arg	5355 Val 5370 Thr 5385 Thr 5400 Lys 5415 Met	Asp Ala Asn Phe	Leu Gly Leu Asn	Gly Pro Lys Thr
Val Ser Leu Tyr Thr	5345 Pro 5360 Gly 5375 Leu 5390 Glu 5405 Glu 5420 Ser 5435	Thr Thr Val Glu Arg	Ser Pro Pro Asp Val	Ser Ser Phe Met Leu Pro	Thr Leu Thr His	5350 Pro 5365 Pro 5380 Leu 5395 Cys 5410 Ser 5425 Tyr 5440	Gly Ser Asn Pro Leu Ser	Thr Ser Phe Gly Leu Gly	Ser Pro Thr Ser Gly Cys	Thr Thr Ile Arg Pro	5355 Val 5370 Thr 5385 Thr 5400 Lys 5415 Met 5430 Leu	Asp Ala Asn Phe Thr	Leu Gly Leu Asn Lys	Gly Pro Lys Thr Asn
Val Ser Leu Tyr Thr Arg	5345 Pro 5360 Gly 5375 Leu 5390 Glu 5405 Glu 5420 Ser 5435 Ser 5450	Thr Thr Val Glu Arg Val Glu	Ser Pro Pro Asp Val Gly Lys	Ser Ser Phe Met Leu Pro	Thr Leu Thr His Gln Leu Gly	5350 Pro 5365 Pro 5380 Leu 5395 Cys 5410 Ser 5425 Tyr 5440 Ala 5455	Gly Ser Asn Pro Leu Ser	Thr Ser Phe Gly Leu Gly Thr	Ser Pro Thr Ser Gly Cys	Thr Thr Ile Arg Pro Arg Val	5355 Val 5370 Thr 5385 Thr 5400 Lys 5415 Met 5430 Leu 5445 Asp	Asp Ala Asn Phe Thr	Leu Gly Leu Asn Lys Leu Ile	Gly Pro Lys Thr Asn Leu Cys

Gly	Pro 5495	Tyr	Thr	Leu	Asp	Arg 5500	Asn	Ser	Leu	Tyr	Val 5505	Asn	Gly	Phe
Thr	His 5510	Gln	Thr	Ser	Ala	Pro 5515	Asn	Thr	Ser	Thr	Pro 5520	Gly	Thr	Ser
Thr	Val 5525	Asp	Leu	Gly	Thr	Ser 5530		Thr	Pro	Ser	Ser 5535	Leu	Pro	Ser
Pro	Thr 5540	Xaa	Xaa	Xaa	Pro	Leu 5545	Leu	Xaa	Pro	Phe	Thr 5550	Leu	Asn	Phe
Thr	Ile 5555	Thr	Asn	Leu	Xaa	Tyr 5560	Glu	Glu	Xaa	Met	Xaa 5565	Xaa	Pro	Gly
Ser	Arg 5570	Lys	Phe	Asn	Thr	Thr 5575	Glu	Arg	Val	Leu	Gln 5580	Gly	Leu	Leu
Xaa	Pro 5585	Xaa	Phe	Lys	Xaa	Thr 5590	Ser	Val	Gly	Xaa	Leu 5595	Tyr	Ser	Gly
Cys	Arg 5600	Leu	Thr	Leu	Leu	Arg 5605	Xaa	Glu	Lys	Xaa	Xaa 5610	Ala	Ala	Thr
Xaa	Val 5615	Asp	Xaa	Xaa	Cys	Xaa 5620	Xaa	Xaa	Xaa	Asp	Pro 5625	Xaa	Xaa	Pro
Gly	Leu 5630	Asp	Arg	Glu	Xaa	Leu 5635	Tyr	Trp	Glu	Leu	Ser 5640	Xaa	Leu	Thr
Xaa	Xaa 5645	Ile	Xaa	Glu	Leu	Gly 5650	Pro	Tyr	Xaa	Leu	Asp 5655	Arg	Xaa	Ser
Leu	Tyr 5660	Val	Asn	Gly	Phe	Thr 5665	His	Trp	Ile	Pro	Val 5670	Pro	Thr	Ser
Ser	Thr 5675	Pro	Gly	Thr	Ser	Thr 5680	Val	Asp	Leu	Gly	Ser 5685	Gly	Thr	Pro
Ser	Ser 5690	Leu	Pro	Ser	Pro	Thr 5695	Thr	Ala	Gly	Pro	Leu 5700	Leu	Val	Pro
Phe	Thr 5705	Leu	Asn	Phe	Thr	Ile 5710	Thr	Asn	Leu	Lys	Tyr 5715	Glu	Glu	Asp
Met	His 5720	Cys	Pro	Gly	Ser	Arg 5725	Lys	Phe	Asn	Thr	Thr 5730	Glu	Arg	Val
Leu	Gln 5735	Ser	Leu	Leu	Gly	Pro 5740	Met	Phe	Lys	Asn	Thr 5745	Ser	Val	Gly
Pro	Leu 5750	Tyr	Ser	Gly	Cys	Arg 5755	Leu	Thr	Ser	Leu	Arg 5760	Ser	Glu	Lys
Asp	Gly 5765	Ala	Ala	Thr	Gly	Val 5770	Asp	Ala	Ile	Cys	Thr 5775	His	Arg	Val
Asp	Pro	Lys	Ser	Pro	Gly	Val	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu

	5780					5785					5790			
Leu	Ser 5795	Gln	Leu	Thr	Asn	Gly 5800	Ile	Lys	Glu	Leu	Gly 5805	Pro	Tyr	Thr
Leu	Asp 5810	Arg	Asn	Ser	Leu	Tyr 5815		Asn	Gly	Phe	Thr 5820	His	Gln	Thr
Ser	Ala 5825	Pro	Asn	Thr	Ser	Thr 5830	Pro	Gly	Thr	Ser	Thr 5835	Val	Asp	Leu
Gly	Thr 5840	Ser	Gly	Thr	Pro	Ser 5845	Ser	Leu	Pro	Ser	Pro 5850	Thr	Ser	Ala
Gly	Pro 5855	Leu	Leu	Val	Pro	Phe 5860	Thr	Leu	Asn	Phe	Thr 5865	Ile	Thr	Asn
Leu	Gln 5870	Tyr	Glu	Glu	Asp	Met 5875	His	His	Pro	Gly	Ser 5880	Arg	Lys	Phe
Asn	Thr 5885	Thr	Glu	Arg	Val	Leu 5890	Gln	Gly	Leu	Leu	Gly 5895	Pro	Met	Phe
Lys	Asn 5900	Thr	Ser	Val	Gly	Leu 5905	Leu	Tyr	Ser	Gly	Cys 5910	Arg	Leu	Thr
Leu	Leu 5915	Arg	Pro	Glu	Lys	Asn 5920	Gly	Ala	Ala	Thr	Gly 5925	Met	Asp	Ala
Ile	Cys 5930	Thr	His	Arg	Leu	Asp 5935	Pro	Lys	Ser	Pro	Gly 5940	Leu	Asp	Arg
Glu	Xaa 5945	Leu	Tyr	Trp	Glu	Leu 5950	Ser	Xaa	Leu	Thr	Xaa 5955	Xaa	Ile	Xaa
Glu	Leu 5960	Gly	Pro	Tyr	Xaa	Leu 5965	Asp	Arg	Xaa	Ser	Leu 5970	Tyr	Val	Asn
Gly	Phe 5975	Xaa	Xaa	Xaa	Xaa	Xaa 5980	Xaa	Xaa	Xaa	Thr	Ser 5985	Thr	Pro	Gly
Thr	Ser 5990	Xaa	Val	Xaa	Leu	Xaa 5995	Thr	Ser	Gly	Thr	Pro 6000	Xaa	Xaa	Xaa
Pro	Xaa 6005	Xaa	Thr	Xaa	Xaa	Xaa 6010	Pro	Leu	Leu	Xaa	Pro 6015	Phe	Thr	Leu
Asn	Phe 6020	Thr	Ile	Thr	Asn	Leu 6025	Xaa	Tyr	Glu	Glu	Xaa 6030	Met	Xaa	Xaa
Pro	Gly 6035	Ser	Arg	Lys	Phe	Asn 6040	Thr	Thr	Glu	Arg	Val 6045	Leu	Gln	Gly
Leu	Leu 6050	Lys	Pro	Leu	Phe	Arg 6055	Asn	Ser	Ser	Leu	Glu 6060	Tyr	Leu	Tyr
Ser	Gly 6065	Cys	Arg	Leu	Ala	Ser 6070	Leu	Arg	Pro	Glu	Lys 6075	Asp	Ser	Ser

Ala	Met 6080	Ala	Val	Asp	Ala	Ile 6085		Thr	His	s Arg	Pro 6090		Pro	Glu
Asp	Leu 6095	Gly	Leu	Asp	Arg	Glu 6100		Leu	Tyr	Trp	Glu 6105		ı Ser	: Asn
Leu	Thr 6110	Asn	Gly	Ile	Gln	Glu 6115		Gly	Pro	Tyr	Thr 6120		Asp	Arg
Asn	Ser 6125	Leu	Tyr	Val	Asn	Gly 6130		Thr	His	Arg	Ser 6135		Met	Pro
Thr	Thr 6140	Ser	Thr	Pro	Gly	Thr 6145		Thr	Val	Asp	Val 6150	_	Thr	Ser
Gly	Thr 6155	Pro	Ser	Ser	Ser	Pro 6160		Pro	Thr	Thr	Ala 6165		Pro	Leu
Leu	Ile 6170	Pro	Phe	Thr	Leu	Asn 6175		Thr	Ile	Thr	Asn 6180		Gln	Tyr
Gly	Glu 6185	Asp	Met	Gly	His	Pro 6190	Gly	Ser	Arg	Lys	Phe 6195		Thr	Thr
Glu	Arg 6200	Val	Leu	Gln	Gly	Leu 6205	Leu	Gly	Pro	Ile	Phe 6210	Lys	Asn	Thr
Ser	Val 6215	Gly	Pro	Leu	Tyr	Ser 6220	Gly	Cys	Arg	Leu	Thr 6225	Ser	Leu	Arg
Ser	Glu 6230	Lys	Asp	Gly	Ala	Ala 6235	Thr	Gly	Val	Asp	Ala 6240	Ile	Cys	Ile
His	His 6245	Leu	Asp	Pro	Lys	Ser 6250	Pro	Gly	Leu	Asn	Arg 6255	Glu	Arg	Leu
Tyr	Trp 6260	Glu	Leu	Ser	Gln	Leu 6265	Thr	Asn	Gly		Lys 6270	Glu	Leu	Gly
Pro	Tyr 6275	Thr	Leu	Asp	Arg	Asn 6280	Ser	Leu	Tyr	Val	Asn 6285	Gly	Phe	Thr
His	Arg 6290	Thr	Ser	Val	Pro	Thr 6295	Thr	Ser	Thr	Pro	Gly 6300	Thr	Ser	Thr
Val	Asp 6305	Leu	Gly	Thr	Ser	Gly 6310	Thr	Pro	Phe	Ser	Leu 6315	Pro	Ser	Pro
Ala	Thr 6320	Ala	Gly	Pro	Leu	Leu 6325	Val	Leu	Phe	Thr	Leu 6330	Asn	Phe	Thr
Ile	Thr 6335	Asn	Leu	Lys	Tyr	Glu 6340	Glu	Asp	Met	His	Arg 6345	Pro	Gly	Ser
Arg	Lys 6350	Phe	Asn	Thr		Glu 6355	Arg	Val	Leu	Gln	Thr 6360	Leu	Leu	Gly
Pro	Met 6365	Phe	Lys	Asn		Ser 6370	Val	Gly	Leu	Leu	Tyr 6375	Ser	Gly	Cys

Arg	Leu 6380	Thr	Leu	Leu	Arg	Ser 6385	Glu	Lys	: Asp	Gly	Ala 6390		a Thr	Gly
Val	Asp 6395	Ala	Ile	Cys	Thr	His 6400		Leu	Asp	Pro	Lys 6405		Pro	Gly
Leu	Asp 6410	Arg	Glu	Xaa	Leu	Tyr 6415		Glu	Leu		Xaa 6420		Thr	Xaa
Хаа	Ile 6425	Xaa	Glu	Leu	Gly	Pro 6430		Xaa	Leu	Asp	Arg 6435		Ser	Leu
Tyr	Val 6440	Asn	Gly	Phe	Xaa	Xaa 6445		Xaa	Xaa	Xaa	Xaa 6450		Thr	Ser
Thr	Pro 6455	Gly	Thr	Ser	Xaa	Val 6460		Leu	Xaa	Thr	Ser 6465		Thr	Pro
Xaa	Xaa 6470	Xaa	Pro	Xaa	Xaa	Thr 6475		Хаа	Хаа	Pro	Leu 6480		Xaa	Pro
Phe	Thr 6485	Leu	Asn	Phe	Thr	Ile 6490		Asn	Leu	Xaa	Tyr 6495		Glu	Xaa
Met	Xaa 6500	Xaa	Pro	Gly	Ser	Arg 6505	Lys	Phe	Asn	Thr	Thr 6510		Arg	Val
Leu	Gln 6515	Gly	Leu	Leu	Arg	Pro 6520	Val	Phe	Lys	Asn	Thr 6525	Ser	Val	Gly
Pro	Leu 6530	Tyr	Ser	Gly	Cys	Arg 6535	Leu	Thr	Leu	Leu	Arg 6540	Pro	Lys	Lys
Asp	Gly 6545	Ala	Ala	Thr	Lys	Val 6550	Asp	Ala	Ile	Суѕ	Thr 6555	Tyr	Arg	Pro
Asp	Pro 6560	Lys	Ser	Pro		Leu 6565	Asp	Arg	Glu	Gln	Leu 6570	Tyr	Trp	Glu
Leu	Ser 6575	Gln	Leu	Thr	His	Ser 6580	Ile	Thr	Glu	Leu	Gly 6585	Pro	Tyr	Thr
Gln	Asp 6590	Arg	Asp	Ser	Leu	Tyr 6595	Val	Asn	Gly	Phe	Thr 6600	His	Arg	Ser
Ser	Val 6605	Pro	Thr	Thr	Ser	Ile 6610	Pro	Gly	Thr	Ser	Ala 6615	Val	His	Leu
Glu	Thr 6620	Thr	Gly	Thr	Pro	Ser 6625	Ser	Phe	Pro	Gly	His 6630	Thr	Glu	Pro
Gly	Pro 6635	Leu	Leu	Ile		Phe 6640	Thr	Phe	Asn	Phe	Thr 6645	Ile	Thr	Asn
Leu	Arg 6650	Tyr	Glu	Glu		Met 6655	Gln	His	Pro	Gly	Ser 6660	Arg	Lys	Phe
Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Thr	Pro	Leu	Phe

	6665	i				6670)				6675	5		
Lys	Asn 6680	Thr	Ser	Val	Gly	Pro 6685		Tyr	Ser	Gly	Cys 6690		Leu	Thr
Leu	Leu 6695		Pro	Glu	Lys	Gln 6700		Ala	Ala	Thr	Gly 6705		Asp	Thr
Ile	Cys 6710		His	Arg	Val	Asp 6715		Ile	Gly	Pro	Gly 6720		Asp	Arg
Glu	Arg 6725	Leu	Tyr	Trp	Glu	Leu 6730		Gln	Leu	Thr	Asn 6735		Ile	Thr
Glu	Leu 6740	Gly	Pro	Tyr	Thr	Leu 6745		Arg	Asp	Ser	Leu 6750		Val	Asp
Gly	Phe 6755		Pro	Trp	Ser	Ser 6760		Pro	Thr	Thr	Ser 6765		Pro	Gly
Thr	Ser 6770		Val	His	Leu	Ala 6775		Ser	Gly	Thr	Pro 6780		Pro	Leu
Pro	Gly 6785		Thr	Ala	Pro	Val 6790		Leu	Leu	Ile	Pro 6795		Thr	Leu
Asn	Phe 6800	Thr	Ile	Thr	Asp	Leu 6805		Tyr	Glu	Glu	Asn 6810		Gln	His
Pro	Gly 6815		Arg	Lys	Phe	Asn 6820	Thr	Thr	Glu	Arg	Val 6825		Gln	Gly
Leu	Leu 6830		Pro	Leu		Lys 6835	Ser	Thr	Ser	Val	Gly 6840	Pro	Leu	Tyr
Ser	Gly 6845	Cys	Arg	Leu	Thr	Leu 6850	Leu	Arg	Pro	Glu	Lys 6855	His	Gly	Ala
Ala	Thr 6860	Gly	Val	Asp	Ala	Ile 6865	Cys	Thr	Leu	Arg	Leu 6870	Asp	Pro	Thr
Gly	Pro 6875	Gly	Leu	Asp	Arg	Glu 6880	Arg	Leu	Tyr	Trp	Glu 6885	Leu	Ser	Gln
Leu	Thr 6890	Asn	Ser	Ile	Thr	Glu 6895	Leu	Gly	Pro	Tyr	Thr 6900	Leu	Asp	Arg
Asp	Ser 6905	Leu	Tyr	Val	Asn	Gly 6910	Phe	Asn	Pro	Trp	Ser 6915	Ser	Val	Pro
Thr	Thr 6920	Ser	Thr	Pro	Gly	Thr 6925	Ser	Thr	Val	His	Leu 6930	Ala	Thr	Ser
Gly	Thr 6935	Pro	Ser	Ser	Leu	Pro 6940	Gly	His	Thr	Thr	Ala 6945	Gly	Pro	Leu
Leu	Val 6950	Pro	Phe	Thr	Leu	Asn 6955	Phe	Thr	Ile	Thr	Asn 6960	Leu	Lys	Tyr

Glı	a Glu 6965	Asp	Met	His	Суз	Pro 6970		/ Sei	r Arg	g Lys	Phe 6975		Thr	Thr
Gli	a Arg 6980	Val	Let	ı Gln	Ser	Leu 6985		Gly	y Pro	Met	Phe 6990		. Asn	Thr
Sei	c Val 6995	Gly	Pro	Leu	Tyr	Ser 7000		v Cys	s Arç	J Lei	Thr 7005		Leu	Arg
Ser	Glu 7010	Lys	Asp	Gly	Ala	Ala 7015		Gl	/ Val	. Asp	7020		Cys	Thr
His	7025	Leu	Asp	Pro	Lys	Ser 7030		Gly	/ Leu	Asp	Arg 7035		Xaa	Leu
Tyr	Trp 7040	Glu	Leu	Ser	Xaa	Leu 7045		Xaa	Xaa	Ile	Xaa 7050		Leu	Gly
Pro	Tyr 7055	Xaa	Leu	Asp	Arg	Xaa 7060	Ser	Leu	Tyr	Val	Asn 7065		Phe	Xaa
Xaa	Xaa 7070	Хаа	Xaa	Xaa	Xaa	Xaa 7075		Ser	Thr	Pro	Gly 7080		Ser	Xaa
Val	Xaa 7085	Leu	Xaa	Thr	Ser	Gly 7090	Thr	Pro	Xaa	Xaa	Xaa 7095		Xaa	Xaa
Thr	Xaa 7100	Xaa	Xaa	Pro	Leu	Leu 7105		Pro	Phe	Thr	Leu 7110		Phe	Thr
Ile	Thr 7115	Asn	Leu	Xaa	Tyr	Glu 7120	Glu	Xaa	Met	Xaa	Xaa 7125		Gly	Ser
Arg	Lys 7130	Phe	Asn	Thr	Thr	Glu 7135	Arg	Val	Leu	Gln	Gly 7140	Leu	Leu	Xaa
Pro	Xaa 7145	Phe	Lys	Xaa	Thr	Ser 7150	Val	Gly	Xaa	Leu	Tyr 7155	Ser	Gly	Cys
Arg	Leu 7160	Thr	Leu	Leu	Arg	Xaa 7165	Glu	Lys	Xaa	Xaa	Ala 7170	Ala	Thr	Xaa
Val	Asp 7175	Xaa	Xaa	Cys	Xaa	Xaa 7180	Xaa	Xaa	Asp	Pro	Xaa 7185	Xaa	Pro	Gly
Leu	Asp 7190	Arg	Glu	Xaa	Leu	Tyr 7195	Trp	Glu	Leu	Ser	Xaa 7200	Leu	Thr	Asn
Ser	Ile 7205	Thr	Glu	Leu	Gly	Pro 7210	Tyr	Thr	Leu	Asp	Arg 7215	Asp	Ser	Leu
Tyr	Val 7220	Asn	Gly	Phe	Thr	His 7225	Arg	Ser	Ser	Met	Pro 7230	Thr	Thr	Ser
Ile	Pro 7235	Gly	Thr	Ser	Ala	Val 7240	His	Leu	Glu	Thr	Ser 7245	Gly	Thr	Pro
Ala	Ser 7250	Leu	Pro	Gly	His	Thr 7255	Ala	Pro	Gly	Pro	Leu 7260	Leu	Val	Pro

Phe	Thr 7265		Asn	Phe	Thr	Ile 7270		Asn	Leu	Gln	Tyr 7275		ı Glu	Asp
Met	Arg 7280		Pro	Gly	Ser	Arg 7285		Phe	Asn	Thr	Thr 7290		Arg	Val
Leu	Gln 7295		Leu	Leu	Lys	Pro 7300		Phe	Lys	Ser	Thr 7305		Val	Gly
Pro	Leu 7310		Ser	Gly	Cys	Arg 7315		Thr	Leu	Leu	Arg 7320		Glu	Lys
Arg	Gly 7325		Ala	Thr	Gly	Val 7330		Thr	Ile	Cys	Thr 7335		Arg	Leu
Asp	Pro 7340		Asn	Pro	Gly	Leu 7345		Arg	Glu	Xaa	Leu 7350	_	Trp	Glu
Leu	Ser 7355		Leu	Thr	Xaa	Xaa 7360		Xaa	Glu	Leu	Gly 7365	Pro	Tyr	Xaa
Leu	Asp 7370	Arg	Xaa	Ser	Leu	Tyr 7375		Asn	Gly	Phe	Xaa 7380	Xaa	Xaa	Xaa
Xaa	Xaa 7385	Xaa	Xaa	Thr	Ser	Thr 7390		Gly	Thr		Xaa 7395	Val	Xaa	Leu
Xaa	Thr 7400	Ser	Gly	Thr	Pro	Xaa 7405	Xaa	Xaa	Pro	Xaa	Xaa 7410	Thr	Xaa	Xaa
	Pro 7415					Phe 7420					7425			
Leu	Xaa 7430					Met 7435					7440		_	
	Thr 7445					Leu 7450					7455			
	7460					Xaa 7465					7470			
	7475					Xaa 7480					7485			
	7490					Asp 7495					7500	Leu	Asp	Arg
Glu	7505					Leu 7510					7515		Ile	
	7520					Leu 7525					7530	Tyr	Val	Asn
	7535					Ser 7540					7545		Pro	-
Thr	Ser	Thr	Val	His	Leu	Ala	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu

	7550	0				7555	ō				7560)		
Pro	Gly 7565	His 5	s Thi	r Ala	a Pro	7570	Pro	Leu	ı Leı	ı Ile	Pro 7575		e Th	r Leu
Asn	Phe 7580	Thi	c Ile	∋ Thi	Asr	1 Leu 7585		туг	Glu	ı Glu	1 Asn 7590		C Gli	n His
Pro	Gly 7595	Ser	Arq	g Lys	Phe	2 Asn 7600	Thr	Thr	Glu	Arg	7605	Leu	ı Glı	n Gly
Leu	Leu 7610	Gly	/ Pro	Met	Phe	Lys 7615	Asn	Thr	Ser	Val	Gly 7620		ı Leı	ı Tyr
Ser	Gly 7625	Cys	Arç	, Leu	Thr	Leu 7630	Leu	Arg	Pro	Glu	Lys 7635		ı Gly	/ Ala
Ala	Thr 7640	Gly	Met	Asp	Ala	Ile 7645	Cys	Ser	His	Arg	Leu 7650		Pro	Lys
Ser	Pro 7655	Gly	Leu	Asp	Arg	Glu 7660	Xaa	Leu	Tyr	Trp	Glu 7665		Ser	Xaa
Leu	Thr 7670	Xaa	Xaa	Ile	Xaa	Glu 7675	Leu	Gly	Pro	Tyr	Xaa 7680		Asp	Arg
Xaa	Ser 7685	Leu	Tyr	Val	Asn	Gly 7690	Phe	Xaa	Xaa	Xaa	Xaa 7695	Xaa	Xaa	Xaa
Xaa	Thr 7700	Ser	Thr	Pro	Gly	Thr 7705		Xaa	Val	Xaa	Leu 7710	Xaa	Thr	Ser
Gly	Thr 7715	Pro	Xaa	Xaa	Xaa	Pro 7720	Xaa	Xaa	Thr	Xaa	Xaa 7725	Xaa	Pro	Leu
Leu	Xaa 7730	Pro	Phe	Thr	Leu	Asn 7735	Phe	Thr	Ile	Thr	Asn 7740	Leu	Xaa	Tyr
Glu	Glu 7745	Xaa	Met	Xaa	Xaa	Pro 7750	Gly	Ser	Arg	Lys	Phe 7755	Asn	Thr	Thr
Glu	Arg 7760	Val	Leu	Gln	Gly	Leu 7765	Leu	Xaa	Pro	Xaa	Phe 7770	Lys	Xaa	Thr
Ser	Val 7775	Gly	Xaa	Leu	Tyr	Ser 7780	Gly	Cys	Arg	Leu	Thr 7785	Leu	Leu	Arg
Xaa	Glu 7790	Lys	Xaa	Xaa	Ala	Ala 7795	Thr	Xaa	Val	Asp	Xaa 7800	Xaa	Cys	Xaa
Xaa	Xaa 7805	Xaa	Asp	Pro	Xaa	Xaa 7810	Pro	Gly	Leu		Arg 7815	Glu	Xaa	Leu
Tyr	Trp 7820	Glu	Leu	Ser	Xaa	Leu 7825	Thr	Xaa	Xaa		Xaa 7830	Glu	Leu	Gly
Pro	Tyr 7835	Xaa	Leu	Asp	Arg	Xaa 7840	Ser	Leu	Tyr		Asn 7845	Gly	Phe	Thr

His	Gln 785	As:	n Se:	r Vai	l Pro	o Thr 785	Th: 5	r Se:	r Thi	r Pro	o Gly 786		r Se	r Thr
Val	. Tyr 786	Tr _l 5	o Ala	a Thi	r Thi	r Gly 787	Th:	r Pro	o Sei	r Sei	r Phe 787		o Gl	y His
Thr	Glu 788	Pro O	o Gly	y Pro) Le	Leu 788!	Il€ 5	e Pro	⊃ Ph∈	e Thi	Phe 7890		n Ph	e Thr
Ile	Thr 789		n Leu	ı His	з Туг	Glu 7900	Glu)	ı Asr	n Met	: Glr	His 7905		o Gl	y Ser
Arg	Lys 791	Phe	e Asr	n Thr	Thr	Glu 7915	Arg	y Val	. Leu	Glr.	1 Gly 7920		ı Le	u Thr
Pro	Leu 7925	Phe	e Lys	s Asn	Thr	Ser 7930	Val	Gly	Pro	Leu	Tyr 7935		Gl;	y Cys
_	Leu 7940	,				7945	i				7950)		Gly
Val	Asp 7955	Thr	· Ile	Cys	Thr	His 7960	Arg	Val	Asp	Pro	Ile 7965		y Pro	Gly
	7970	ľ				Tyr 7975					7980			
	7983					Pro 7990					7995			
Tyr	Val 8000	Asn	Gly	Phe	Xaa	Xaa 8005	Xaa	Xaa	Xaa	Xaa	Xaa 8010		Thr	Ser
Thr	Pro 8015	Gly	Thr	Ser	Xaa	Val 8020	Xaa	Leu	Xaa	Thr	Ser 8025	Gly	Thr	Pro
	Xaa 8030					Thr 8035					8040			
Phe	Thr 8045	Leu	Asn	Phe	Thr	Ile 8050	Thr	Asn	Leu	Xaa	Tyr 8055	Glu	Glu	Xaa
Met	Xaa 8060	Xaa	Pro	Gly	Ser	Arg 8065	Lys	Phe	Asn	Thr	Thr 8070	Glu	Arg	Val
	Gln 8075	Gly	Leu	Leu	Xaa	Pro 8080	Xaa	Phe	Lys	Xaa	Thr 8085	Ser	Val	Gly
	Leu 8090	Tyr	Ser	Gly	Cys	Arg 8095	Leu	Thr	Leu	Leu	Arg 8100	Xaa	Glu	Lys
Xaa	Xaa 8105	Ala	Ala	Thr	Xaa	Val 8110	Asp	Xaa	Xaa		Xaa 8115	Xaa	Xaa	Xaa
Asp	Pro 8120	Xaa	Xaa	Pro	Gly	Leu 8125	Asp	Arg	Glu		Leu 8130	Tyr	Trp	Glu
Leu	Ser 8135	Xaa	Leu	Thr	Xaa	Xaa 8140	Ile :	Xaa 🛚	Glu :		Gly 8145	Pro	Tyr	Xaa

Lei	Asp 815	Ar O	g Xa	a Se:	r Lei	u Tyr 815	Va 5	l As	n Gl	y Ph	e Thr 816		s Aro	g Ser
Sei	816	Pr 5	o Th	r Th	r Sei	817	Pro O	o Gl	y Th:	r Se	r Thr 817		l His	s Leu
Alá	818	Se.	r Gl	y Thi	r Pro	Ser 818	Se: 5	r Le	u Pro	o Gl	y His 819		c Ala	a Pro
Val	Pro 819	Le:	u Lei	u Ile	e Pro	Phe 8200	Th:	r Lei	ı Asr	n Phe	e Thr 820		e Thr	: Asn
Leu	His 8210	Ту:	r Glı	a Glu	ı Asn	Met 8215	Glr 5	n His	s Pro	o Gly	y Ser 8220		J Lys	Phe
Asn	Thr 8225	Thi	c Glu	ı Arç	y Val	Leu 8230	Glr	n Gly	/ Leu	ı Let	Lys 8235		Leu	Phe
Lys	Ser 8240	Thi	Ser	· Val	Gly	Pro 8245	Leu	1 Туг	Ser	Gly	7 Cys 8250		Leu	Thr
Leu	Leu 8255	Arç	g Pro	Glu	Lys	His 8260	Gly	Ala	Ala	Thr	Gly 8265	Val	Asp	Ala
Ile	Cys 8270	Thr	Leu	ı Arg	Leu	Asp 8275	Pro	Thr	Gly	Pro	Gly 8280		Asp	Arg
Glu	Xaa 8285	Leu	Tyr	Trp	Glu	Leu 8290	Ser	Xaa	Leu	Thr	Xaa 8295		Ile	Xaa
Glu	Leu 8300	Gly	Pro	Tyr	Xaa	Leu 8305	Asp	Arg	Xaa	Ser	Leu 8310		Val	Asn
Gly	Phe 8315	Xaa	Xaa	Xaa	Xaa	Xaa 8320	Xaa	Xaa	Xaa	Thr	Ser 8325		Pro	Gly
Thr	Ser 8330	Xaa	Val	Xaa	Leu	Xaa 8335	Thr	Ser	Gly	Thr	Pro 8340		Xaa	Xaa
Pro	Xaa 8345	Xaa	Thr	Xaa	Xaa	Xaa 8350	Pro	Leu	Leu	Xaa	Pro 8355		Thr	Leu
Asn	Phe 8360	Thr	Ile	Thr	Asn	Leu 8365	Xaa	Tyr	Glu	Glu	Xaa 8370	Met	Xaa	Xaa
Pro	Gly 8375	Ser	Arg	Lys	Phe	Asn 8380	Thr	Thr	Glu	Arg	Val 8385	Leu	Gln	Gly
Leu	Leu 8390	Xaa	Pro	Xaa	Phe	Lys 8395	Xaa	Thr	Ser	Val	Gly 8400	Xaa	Leu	Tyr
Ser	Gly 8405	Cys	Arg	Leu	Thr	Leu 8410	Leu	Arg	Xaa	Glu	Lys 8415	Xaa	Xaa	Ala
Ala	Thr 8420	Xaa	Val	Asp	Xaa	Xaa 8425	Cys	Xaa	Xaa	Xaa	Xaa 8430	Asp	Pro	Xaa
Xaa	Pro	Gly	Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa

	8435	5				844	0				844	5		
Leu	Thr 845(Xaa	a Xaa	a Ile	e Xaa	a Glu 845	Leu 5	ı Gly	y Pro	Э Туг	Xaa 846		u As	p Arg
Xaa	Ser 8465	Leu	а Туг	r Val	l Asr	Gly 8470	Phe O	e Thi	c His	s Arç	Thr 847		r Va	l Pro
Thr	Thr 8480	Ser	Thi	r Pro	o Gly	7 Thr 8485	Ser	Thr	. Val	His	Leu 8490		a Th	r Ser
Gly	Thr 8495	Pro	Ser	s Ser	Leu	Pro 8500	Gly	His	Thr	Ala	Pro 8505		L Pro	o Leu
Leu	Ile 8510	Pro	Phe	e Thr	Leu	8515	Phe	Thr	Ile	Thr	Asn 8520		ı Glı	n Tyr
Glu	Glu 8525	Asp	Met	. His	Arg	Pro 8530	Gly	Ser	Arg	Lys	Phe 8535		ı Thi	Thr
Glu	Arg 8540	Val	Leu	Gln	Gly	Leu 8545		Ser	Pro	Ile	Phe 8550		Asr	ser
Ser	Val 8555	Gly	Pro	Leu	Tyr	Ser 8560	Gly	Cys	Arg	Leu	Thr 8565		Leu	a Arg
Pro	Glu 8570	Lys	Asp	Gly	Ala	Ala 8575	Thr	Gly	Met	Asp	Ala 8580		Cys	Leu
Tyr	His 8585	Pro	Asn	Pro	Lys	Arg 8590	Pro	Gly	Leu	Asp	Arg 8595		Gln	Leu
Tyr	Cys 8600	Glu	Leu	Ser	Gln	Leu 8605	Thr	His	Asn	Ile	Thr 8610	Glu	Leu	Gly
Pro	Tyr 8615	Ser	Leu	Asp	Arg	Asp 8620	Ser	Leu	Tyr	Val	Asn 8625	Gly	Phe	Thr
His	Gln 8630	Asn	Ser	Val	Pro	Thr 8635	Thr	Ser	Thr	Pro	Gly 8640	Thr	Ser	Thr
Val	Tyr 8645	Trp	Ala	Thr	Thr	Gly 8650	Thr	Pro	Ser	Ser	Phe 8655	Pro	Gly	His
Thr	Xaa 8660	Xaa	Xaa	Pro	Leu	Leu 8665	Xaa	Pro	Phe	Thr	Leu 8670	Asn	Phe	Thr
Ile	Thr 8675	Asn	Leu	Xaa	Tyr	Glu 8680	Glu	Xaa	Met		Xaa 8685	Pro	Gly	Ser
Arg	Lys 8690	Phe	Asn	Thr	Thr	Glu 8695	Arg	Val	Leu		Gly 8700	Leu	Leu	Xaa
Pro :	Xaa 8705	Phe	Lys	Xaa	Thr	Ser 8710	Val	Gly	Xaa		Tyr 8715	Ser	Gly	Cys
Arg :	Leu 8720	Thr	Leu	Leu	Arg	Xaa 8725	Glu	Lys	Xaa :		Ala 8730	Ala	Thr	Xaa

Val	Asp 873	Xaa 5	a Xa	a Cys	s Xaa	a Xaa 874	Xaa O	a Xaa	a Asp	o Pro	Xaa 874	Xa 5	a Pr	o Gly
Leu	Asp 8750	Arç O	g Glı	u Xaa	a Lei	ı Tyr 875	Trp 5	o Glu	ı Let	ı Ser	Xaa 876		u Th	r Xaa
Xaa	Ile 8765	Xaa 5	a Glu	ı Leu	ı Gly	y Pro 8770	Tyr	: Xaa	Leu	ı Asp	Arg 877		a Se	r Leu
Tyr	Val 8780	Asr)	Gly	y Phe	Thr	His 8785	Trp	Ser	Ser	Gly	Leu 8790		r Th:	r Ser
Thr	Pro 8795	Trp	Thr	Ser	Thr	Val 8800	Asp	Leu	Gly	Thr	Ser 880		y Thi	r Pro
Ser	Pro 8810	Val	Pro	Ser	Pro	8815	Thr	Ala	Gly	Pro	Leu 8820		ı Val	Pro
Phe	Thr 8825	Leu	Asn	Phe	Thr	1le 8830	Thr	Asn	Leu	Gln	Tyr 8835		ı Glu	ı Asp
Met	His 8840	Arg	Pro	Gly	Ser	Arg 8845	Lys	Phe	Asn	Ala	Thr 8850		Arg	Val
Leu	Gln 8855	Gly	Leu	Leu	Ser	Pro 8860	Ile	Phe	Lys	Asn	Thr 8865		Val	Gly
	8870					Arg 8875					8880			
	8885					Val 8890					8895			
	8900					Leu 8905					8910			
	8915					Xaa 8920					8925			
Leu	Asp 8930	Arg	Xaa	Ser	Leu	Tyr 8935	Val	Asn	Gly	Phe	Xaa 8940	Xaa	Xaa	Xaa
Xaa	Xaa 8945	Xaa	Xaa	Thr	Ser	Thr 8950	Pro	Gly	Thr	Ser	Xaa 8955	Val	Xaa	Leu
	Thr 8960					Xaa 8965					8970		Xaa	Xaa
	8975					Phe 8980					8985		Thr	
Leu :	Xaa 8990	Tyr	Glu	Glu	Xaa	Met 8995	Xaa .	Xaa	Pro		Ser 9000	Arg	Lys	Phe
	Thr 9005	Thr	Glu	Arg		Leu 9010	Gln	Gly :	Leu :		Xaa 9015	Pro	Xaa	Phe
Lys :	Xaa 9020	Thr	Ser	Val	Gly	Xaa 9025	Leu '	Tyr :	Ser (Cys 9030	Arg	Leu	Thr

Leu	Leu 903	Ar 5	g Xa	a Gl	u Ly.	s Xaa 904	Xaa 0	a Ala	a Ala	a Thi	r Xaa 904	Va 5	l As	p Xaa
Хаа	Cys 905	Ха 0	a Xa	a Xa	a Xaa	a Asp 905	Pro 5	o Xaa	a Xaa	a Pro	Gly 906		u As	p Arg
Glu) Xaa 906	Le 5	и Ту	r Tr	p Glı	Leu 907	Sei O	: Xaa	a Leu	ı Thr	Xaa 907.		a Il	e Xaa
Glu	Leu 908	Gl O	y Pr	о Ту	r Xaa	Leu 9085	Asp 5	Arg	g Xaa	a Ser	Leu 9090		r Val	l Asn
Gly	Phe 909!	Th 5	r Hi	s Ar	g Ser	Phe 9100	Gly	/ Leu	Thr	Thr	Ser 9105		r Pro	Trp
Thr	Ser 9110	Th.	r Va	l Asp	o Leu	Gly 9115	Thr	Ser	Gly	/ Thr	Pro 9120		r Pro	Val
Pro	Ser 9125	Pro	o Thi	r Thi	c Ala	Gly 9130	Pro	Leu	Leu	Val	Pro 9135		e Thr	Leu
Asn	Phe 9140	Th:	c Ile	∋ Thr	Asn	Leu 9145	Gln	Tyr	Glu	Glu	Asp 9150		. His	Arg
Pro	Gly 9155	Sei	a Arg	J Lys	Phe	Asn 9160	Thr	Thr	Glu	Arg	Val 9165		ı Gln	Gly
Leu	Leu 9170	Thr	Pro) Leu	Phe	Arg 9175	Asn	Thr	Ser	Val	Ser 9180		Leu	Tyr
Ser	Gly 9185	Cys	arç	Leu	Thr	Leu 9190	Leu	Arg	Pro	Glu	Lys 9195		Gly	Ala
Ala	Thr 9200	Arg	/ Val	Asp	Ala	Val 9205	Cys	Thr	His	Arg	Pro 9210		Pro	Lys
Ser	Pro 9215	Gly	Leu	Asp	Arg	Glu 9220	Xaa	Leu	Tyr	Trp	Glu 9225	Leu	Ser	Xaa
Leu	Thr 9230	Xaa	Xaa	Ile	Xaa	Glu 9235	Leu	Gly	Pro	Tyr	Xaa 9240	Leu	Asp	Arg
Xaa	Ser 9245	Leu	Tyr	Val	Asn	Gly 9250	Phe	Xaa	Xaa	Xaa	Xaa 9255	Xaa	Xaa	Xaa
Xaa	Thr 9260	Ser	Thr	Pro	Gly	Thr 9265	Ser	Xaa	Val	Xaa	Leu 9270	Xaa	Thr	Ser
Gly	Thr 9275	Pro	Xaa	Xaa	Xaa	Pro 9280	Xaa	Xaa	Thr		Xaa 9285	Xaa	Pro	Leu
Leu :	Xaa 9290	Pro	Phe	Thr	Leu	Asn 9295	Phe	Thr	Ile		Asn 9300	Leu	Xaa	Tyr
Glu (Glu 9305	Xaa	Met	Xaa	Xaa	Pro 9310	Gly	Ser .	Arg		Phe 9315	Asn	Thr	Thr
Glu A	Arg	Val	Leu	Gln	Gly	Leu	Leu	Xaa :	Pro 1	Xaa :	Phe	Lys	Xaa	Thr

	93	20				93.	25				933	30			
Se	er Va 93	1 G 35	ly Xa	aa Le	eu Ty	/r Se:	r G:	ly Cy	ys Ai	fg Le	u Thi	: Le	eu L	eu <i>l</i>	Arg
Xa	ia Gli 93!	u L _i 50	ys Xa	aa Xa	a Al	a Ala 935	a Th	nr Xa	ıa Va	al As	р Хаа 936	n Xa 50	ia C	ys X	Kaa
Xa	a Xaa 930		aa As	sp Pr	o Xa	a Xaa 937	a Pr 70	0 G1	y Le	u As	p Arg 937	Gl 5	u Xa	aa I	Leu
Ту	r Trp 938	G] 30	u Le	u Se	r Xa	a Leu 938	Th	ır Xa	a Xa	a Il	e Xaa 939		u Le	eu G	Sly
Pr	o Tyr 939	Xa 95	a Le	u As	p Ar	g Xaa 940	Se 0	r Le	и Ту	r Val	l Asn 940		y Ph	e T	hr'
Hi:	s Trp 941		e Pr	o Vai	l Pro	o Thr 941	Se 5	r Se	r Th	r Pro	942		r Se	r T	hr
Va.	942	Le 5	u Gl	y Sei	c Gly	y Thr 943	Pr	o Se:	r Sei	r Leu	Pro 943!	Se:	r Pr	0 Т	hr
Thi	Ala 944	Gl O	y Pro) Lei	ı Leı	val 944	Pro 5	o Phe	e Thi	r Leu	Asn 945(e Th	r I.	le
Thr	945		u Glr	n Tyr	Gly	/ Glu 9460	Asp O	o Met	: Gl	/ His	Pro 9465		7 Se	r Ai	rg
Lys	Phe 9470	Ası O	n Thr	Thr	Glu	Arg 9475	Val	Leu	Gln	Gly	Leu 9480	Leu	Gly	y Pi	0
Ile	Phe 9485	Lys 5	s Asn	Thr	Ser	Val 9490	Gly	Pro	Leu	Tyr	Ser 9495	Gly	Cys	s Ar	g
Leu	Thr 9500	Ser	Leu	Arg	Ser	Glu 9505	Lys	Asp	Gly	Ala	Ala 9510	Thr	Gly	' Va	1
Asp	Ala 9515	Ile	Cys	Ile	His	His 9520	Leu	Asp	Pro	Lys	Ser 9525	Pro	Gly	Le	u
Asp	Arg 9530	Glu	Xaa	Leu	Tyr	Trp 9535	Glu	Leu	Ser	Xaa	Leu 9540	Thr	Xaa	Ха	a
Ile	Xaa 9545	Glu	Leu	Gly	Pro	Tyr 9550	Xaa	Leu	Asp	Arg	Xaa 9555	Ser	Leu	Ty.	r
Val	Asn 9560	Gly	Phe	Xaa	Xaa	Xaa 9565	Xaa	Xaa	Xaa	Xaa	Xaa 9570	Thr	Ser	Th	r
Pro	Gly 9575	Thr	Ser	Xaa	Val	Xaa 9580	Leu	Xaa	Thr	Ser	Gly 9585	Thr	Pro	Xaa	a
Xaa	Xaa 9590	Pro	Xaa	Xaa	Thr	Xaa 9595	Xaa	Xaa	Pro	Leu	Leu 9600	Xaa	Pro	Ph∈	9
Thr	Leu 9605	Asn	Phe	Thr		Thr 9610	Asn	Leu	Xaa		Glu 9615	Glu	Xaa	Met	

Xa	a Xaa 962	a F 20	ro	Gly	⁄ S∈	r Ai	g]	Lys 962	Ph 5	ne A	lsn	Th	r Th	ır Gli 963	ı Ar 30	g Va	al	Leu
Gla	n Gly 963	7 L 35	eu	Leu	Ха	a Pr	ο Σ <u>ς</u>	Kaa 964	Ph 0	e L	ys	Xaa	a Th	r Sei 964		1 G]	Lу	Xaa
Lei	ע Tyr 965	s 50	er	Gly	Су	s Ar	g I	Leu 9655	Th 5	r L	eu	Leu	ı Ar	g Xaa 966	Gl 50	u Ly	/S	Xaa
Xaa	a Ala 966	. А 55	la '	Thr	Хa	a Va	1 A	sp 167(Xa)	a X	aa	Суз	s Xa	a Xaa 967	Xa 5	a Xa	a	Asp
Pro	968	0 X	aa 1	Pro	Gl	y Le	u A 9	sp 685	Ar	g G	lu	Xaa	Le	u Tyr 969		p Gl	u	Leu
Ser	: Xaa 969	Le 5	eu T	hr	Xaa	a Xa	a I 9	le 700	Xaa	a G	lu	Leu	Gl	y Pro 970	Ту: 5	r Xa	a :	Leu
Asp	971	Ха 0	aa S	Ser	Lei	а Ту	r V 9	al 715	Asr	n G	lу	Phe	Thi	His 972		ı Th	r 1	Phe
Ala	Pro 972	As 5	n T	hr'	Ser	Th:	9 P	ro 730	Gl	/ Tł	nr	Ser	Thi	7 Val 973		Le	u (Gly
Thr	Ser 974(у Т	hr	Pro	Sei	5 Se	er 745	Leu	ı Pr	0	Ser	Pro	9750	Ser	Ala	a (Sly
Pro	Leu 9755	Le	u V	al	Pro	Ph∈	97	nr 760	Leu	As	n :	Phe	Thr	Ile 9765	Thr	Asr	n I	eu
Gln	Tyr 9770	Gl	u G	lu	Asp	Met	Ні 97	.s 75	His	Pr	0 (Gly	Ser	Arg 9780		Ph∈	e A	sn
	5,05						97	90						Pro 9795				
	3000						90	05						Arg 9810				
Leu	Arg 9815	Pro	o G1	u l	Lys	Asn	G1 98	у 20	Ala	Ala	а Т	'hr	Arg	Val 9825	Asp	Ala	V	al
Cys	Thr 9830	His	S Ar	g I	?ro	Asp	Pr 98	o 35	Lys	Sei	î P	ro	Gly	Leu 9840		Arg	G.	lu
Xaa	Leu 9845	Tyr	`Tr	p 0	Slu	Leu	Se: 98:	r 50	Xaa	Lei	ı T	hr :	Xaa	Xaa 9855	Ile	Xaa	G]	Lu
Leu	Gly 9860	Pro	Ту	r X	aa	Leu	Asp 986	5 . 55	Arg	Xaa	s S	er 1	Ĺeu	Tyr 9870	Val	Asn	G1	У
Phe 1	Xaa 9875	Xaa	Хa	a X	aa	Xaa	Xaa 988	a :	Xaa	Xaa	T	hr S	Ser	Thr 9885	Pro	Gly	Th	ır
Ser 2	Kaa 9890	Val	Хa	a L	eu	Xaa	Thr 989	. 5	Ser	Gly	Tł	nr E		Xaa 9900	Xaa	Xaa	Pr	0
Xaa X	Kaa 9905	Thr	Ala	a P	ro	Val	Pro 991	O I	Leu	Leu	IJ	le F		Phe 9915	Thr	Leu	As	n

Phe	Thr 9920	Ile	Thr	Asn	Leu	His 9925	Tyr	Glu	Glu	Asn	Met 9930	Gln I	lis :	Pro
Gly	Ser 9935	Arg	Lys	Phe	Asn	Thr 9940	Thr	Glu	Arg	Val	Leu 9945	Gln (Sly 1	Leu
Leu	Arg 9950	Pro	Leu	Phe	Lys	Ser 9955	Thr	Ser	Val	Gly	Pro 9960	Leu I	yr S	Ser
Gly	Cys 9965	Arg	Leu	Thr	Leu	Leu 9970	Arg	Pro	Glu		His (Gly A	la A	Ala
Thr	Gly 9980	Val	Asp	Ala	Ile	Cys 9985	Thr	Leu	Arg		Asp 1 9990	Pro T	hr G	Sly
Pro	Gly 9995	Leu	Asp	Arg	Glu	Arg 10000	Leu	Tyr	Trp	Glu	Leu 10005		Gln	Leu
Thr	Asn 10010	Ser	· Val	Thr	Glu	ı Leu 1001	Gl _. 5	y Pr	о Ту	r Th	r Leu 1002	As:	p Ar	g Asp
Ser	Leu 10025	Tyr	· Val	. Asn	Gly	Phe 1003	Th:	r Gl	n Ar	g Se:	r Ser 1003	Val	l Pr	o Thr
Thr	Ser 10040	Ile	Pro	Gly	Thr	Ser 1004	Ala 5	a Vai	l Hi:	s Lei	a Glu 1005	Th:	r Se	r Gly
Thr	Pro 10055	Ala	Ser	Leu	Pro	Gly 1006	His O	s Thi	c Ala	a Pro	Gly 1006) Le	ı Leu
Val	Pro 10070	Phe	Thr	Leu	Asn	Phe 10075	Thr	: Ile	e Thi	Asr	Leu 1008	Glr O	туз	Glu
Val .	Asp 10085	Met	Arg	His	Pro	Gly 10090	Ser	Arg	l Lys	Phe	Asn 1009	Thr 5	Thr	Glu
Arg	Val 10100	Leu	Gln	Gly	Leu	Leu 10105	Lys	Pro	Leu	Phe	Lys 1011	Ser	Thr	Ser
Val (Gly 10115	Pro	Leu	Tyr	Ser	Gly 10120	Cys	Arg	Leu	Thr	Leu 10125	Leu	Arg	Pro
Glu 1	Lys 10130	Arg	Gly	Ala	Ala	Thr 10135	Gly	Val	Asp	Thr	Ile 10140	Cys	Thr	His
Arg I	Seu 10145	Asp	Pro	Leu	Asn	Pro 10150	Gly	Leu	Asp	Arg	Glu 10155		Leu	Tyr
Trp 0	Slu .0160	Leu	Ser	Lys	Leu	Thr 10165	Arg	Gly	Ile	Ile	Glu 10170	Leu	Gly	Pro
Tyr L	eu 0175	Leu	Asp	Arg	Gly	Ser 10180	Leu	Tyr	Val	Asn	Gly 10185		Thr	His
Arg A	sn 0190	Phe	Val	Pro	Ile	Thr 10195	Ser	Thr	Pro	Gly	Thr 10200		Thr	Val
His L	eu	Gly	Thr .	Ser	Glu	Thr	Pro	Ser	Ser	Leu	Pro	Arg	Pro	Ile

	1020	5				1021	0				1021	5		
Val	Pro 1022(Gl _y	/ Pro) Leu	ı Lei	u Val 1022	Pr 5	o Ph	e Th	r Le	a Asn 1023		e Th	r Ile
Thr	Asn 10235	Leu	ı Glr	туг	Glı	u Glu 1024	Al.	a Me	t Ar	g His	s Pro 1024		y Se	r Arg
Lys	Phe 10250	Asn	Thr	Thr	· Glı	a Arg 1025	Val	l Le	ı Glı	n Gly	/ Leu 1026	Le O	u Ar	g Pro
Leu	Phe 10265	Lys	Asn	Thr	Ser	lle 10270	Gl <u>y</u> O	y Pro	Lei	ı Tyr	Ser 1027	Se:	r Cy	s Arg
Leu	Thr 10280	Leu	Leu	Arg	Pro	Glu 10285	Lys 5	s Asp	Lys	s Ala	Ala 10290	Th:	r Ar	g Val
Asp	Ala 10295	Ile	Cys	Thr	His	His 10300	Pro	Asp	Pro	Gln	Ser 10305	Pro	o Gl	y Leu
Asn	Arg 10310	Glu	Gln	Leu	Tyr	Trp 10315	Glu	ı Leu	Ser	Gln	Leu 10320		His	s Gly
Ile	Thr 10325	Glu	Leu	Gly	Pro	Tyr 10330	Thr	Leu	Asp	Arg	Asp 10335		Lei	Tyr
Val	Asp 10340	Gly	Phe	Thr	His	Trp 10345	Ser	Pro	Ile	Pro	Thr 10350	Thr	Ser	Thr
Pro	Gly 10355	Thr	Ser	Ile	Val	Asn 10360	Leu	Gly	Thr	Ser	Gly 10365	Ile	Pro	Pro
Ser	Leu 10370	Pro	Glu	Thr	Thr	Xaa 10375	Xaa	Xaa	Pro	Leu	Leu 10380		Pro	Phe
Thr	Leu 10385	Asn	Phe	Thr	Ile	Thr 10390	Asn	Leu	Xaa	Tyr	Glu 10395	Glu	Xaa	Met
Xaa	Xaa 10400	Pro	Gly	Ser	Arg	Lys 10405	Phe	Asn	Thr	Thr	Glu 10410	Arg	Val	Leu
Gln	Gly 10415	Leu	Leu	Lys	Pro	Leu 10420	Phe	Lys	Ser	Thr	Ser 10425	Val	Gly	Pro
Leu	Tyr 10430	Ser	Gly	Сув .	Arg	Leu 10435	Thr	Leu	Leu	Arg	Pro 10440	Glu	Lys	Asp
Gly	Val 10445	Ala	Thr .	Arg '	Val	Asp 10450	Ala	Ile	Cys		His 10455	Arg	Pro	Asp
Pro I	Lys 10460	Ile	Pro (Gly 1	Leu	Asp 10465	Arg	Gln	Gln		Tyr 10470	Trp	Glu	Leu
Ser (Gln :	Leu :	Thr I	His S	Ser	Ile 10480	Thr	Glu	Leu		Pro 10485	Tyr	Thr	Leu
Asp A	Arg /	Asp S	Ser I	Leu I	Tyr '	Val 10495	Asn	Gly	Phe		Gln 10500	Arg	Ser	Ser

Val	Pro 10505	Thr	Thr	Ser 1	hr	Pro 1051	G1 L0	ly T	hr E	Phe 1	hr :	Val 1051:	Gl 5	n Pi	0.0	Glu
Thr	Ser 10520	Glu	Thr	Pro S	er	Ser 1052	Le 25	eu P	ro G	Sly F	ro '	Thr 1053(Al	a Th	ır	Gly
Pro	Val 10535	Leu	Leu	Pro F	he	Thr 1054	L∈ 0	eu A:	sn P	he T		Ile L0545	Th:	r As	n :	Leu
Gln	Tyr 10550	Glu	Glu	Asp M	et	His 1055	Ar 5	g Pi	ro G	ly S	er <i>P</i>	Arg .0560	Ly:	s Ph	e i	Asn
Thr	Thr 10565	Glu	Arg	Val L	eu	Gln 1057	G1 0	y Le	eu L	eu M	et F	ro .0575	Lei	ı Ph	e I	Гуs
Asn	Thr 10580	Ser	Val :	Ser S	er	Leu 1058	Ту 5	r Se	er G.	ly C	ys A 1	rg 0590	Leu	ı Th	r I	-eu
Leu	Arg 10595	Pro	Glu 1	Lys A	sp	Gly 1060(Al.	a Al	a Ti	nr Ai	rg V 1	al 0605	Asp	Al.	a V	'al
Cys	Thr 10610	His	Arg E	Pro As	q	Pro 10615	Ly:	s Se	r Pı	co G]	ly L	eu 0620	Asp	Arg	g G	lu
Arg	Leu 10625	Tyr	Trp I	.ys L∈	eu i	Ser 10630	Glr	n Le	u Th	ır Hi	s G	ly 0635	Ile	Thi	G	lu
Leu	Gly 10640	Pro '	Tyr T	'nr Le	u Z	Asp 10645	Arc	g Hi:	s Se	r Le	u Ty 10	yr 0650	Val	Asr	ı G	ly
Phe	Thr 10655	His (Gln S	er Se	r N	Met 10660	Thr	Th	r Th	r Ar	g Th	nr)665	Pro	Asp	Tì	nr
-	Thr 1				1	.06/5					10	680				
-	Pro 1				1	.0690					10	695				
_					Т	0705					10	710				
_	Ser <i>F</i> .0715				Т	0720					10	725				
Leu A 1	rg F 0730	ro V	al Ph	ne Lys	3 A.	sn 0735	Thr	Ser	Val	. Gly	Pro 10	o 1 740	Leu	Tyr	Se	r
Gly C 1	ys A 0745	rg L	eu Th	ır Lev	1 Le	eu 0750	Arg	Pro	Lys	Lys	Asp 107) (755	Gly A	Ala	A1.	a
1	ys V 0760				10	765					107					
Pro G	ly L 0775	eu As	sp Ar	g Glu	G1 10	ln)780	Leu	Tyr	Trp	Glu	Leu 107	ı S '85	er (Sln	Leı	1
Thr Hi	is S 0790	er I]	e Th	r Glu	Le 10	eu ()795	Gly	Pro	Tyr	Thr	Gln 108	00	sp A	Arg .	Asp)

Sei	Leu 1080	Ту: 5	: Asr	n Vai	l Gl	y Phe 1081	Th:	r Gli	n Arç	g Sei	Ser 1081	Val	l Pr	o Thr
Thi	Ser 1082	Va]	l Pro	o Gly	y Thi	r Pro 1082	Thi 5	c Val	l Asp) Leu	1 Gly 10830		r Se:	r Gly
Thr	Pro 1083	Val	Ser	Lys	s Pro	Gly 10840	Pro	Ser	c Ala	a Ala	Ser 10845	Pro	Le:	ı Leu
Val	Leu 10850	Phe	. Thr	Lei	ı Asr	10855	Thr	: Ile	e Thr	Asn	Leu 10860		ј Туз	r Glu
Glu	10865	Met	Gln	His	Pro	Gly 10870	Ser	Arg			Asn 10875		Thi	Glu
Arg	Val 10880	Leu)	Gln	Gly	Leu	Leu 10885	Arg	Ser	Leu	Phe	Lys 10890		Thr	Ser
Val	Gly 10895	Pro	Leu	Tyr	Ser	Gly 10900	Cys	Arg	Leu	Thr	Leu 10905		Arg	Pro
Glu	Lys 10910	Asp	Gly	Thr	Ala	Thr 10915	Gly	Val	Asp	Ala	Ile 10920		Thr	His
	10925					Pro 10930					10935			
	10940					Thr 10945					10950			
	10955					Ser 10960					10965			
	10970					Thr 10975					10980			
	10985					Thr 10990					10995			
	11000					Ile 11005					11010			
	11015					Glu 11020					11025			
Phe	11030					Val 11035					11040			
Phe	11045					Gly 11050					11055			
	11060					Lys 11065					11070			
	11075					Pro 11080					11085	Gly	Leu	Asp
Arg	Glu	Gln	Leu	Tyr	Leu	Glu	Leu	Ser	Gln	Leu	Thr	His	Ser	Ile

	11090)				11095	5				11100)		
Thr	Glu 11105	Leu	Gly	Pro	Tyr	Thr 11110	Leu)	Asp	Arg		Ser 11115		і Туг	. Val
Asn	Gly 11120	Phe	Thr	His	Arg	Ser 11125	Ser	Val	Pro	Thr	Thr 11130		Thr	Gly
Val	Val 11135	Ser	Glu	Glu	Pro	Phe 11140	Thr	Leu	Asn	Phe	Thr 11145		e Asn	a Asn
Leu	Arg 11150	Tyr	Met	Ala	Asp	Met 11155	Gly	Gln	Pro		Ser 11160		Lys	Phe
Asn	Ile 11165	Thr	Asp	Asn	Val	Met 11170	Lys	His	Leu		Ser 11175		Leu	Phe
Gln	Arg 11180	Ser	Ser	Leu	Gly	Ala 11185		Tyr	Thr	Gly	Cys 11190		Val	Ile
Ala	Leu 11195	Arg	Ser	Val	Lys	Asn 11200	Gly	Ala	Glu	Thr	Arg 11205		Asp	Leu
Leu	Cys 11210	Thr	Tyr	Leu	Gln	Pro 11215		Ser	Gly	Pro	Gly 11220	Leu	Pro	Ile
Lys	Gln 11225	Val	Phe	His	Glu	Leu 11230		Gln	Gln	Thr	His 11235		Ile	Thr
Arg	Leu 11240	Gly	Pro	Tyr	Ser	Leu 11245	Asp	Lys	Asp	Ser	Leu 11250	Tyr	Leu	Asn
Gly	Tyr 11255	Asn	Glu	Pro	Gly	Leu 11260	Asp	Glu			Thr 11265		Pro	Lys
Pro	Ala 11270	Thr	Thr	Phe	Leu	Pro 11275	Pro	Leu	Ser	Glu	Ala 11280	Thr	Thr	Ala
Met	Gly 11285	Tyr	His	Leu	Lys	Thr 11290	Leu	Thr	Leu	Asn	Phe 11295	Thr	Ile	Ser
Asn	Leu 11300	Gln	Tyr	Ser	Pro	Asp 11305	Met	Gly	Lys	Gly	Ser 11310	Ala	Thr	Phe
Asn	Ser 11315	Thr	Glu	Gly	Val	Leu 11320	Gln	His	Leu	Leu	Arg 11325	Pro	Leu	Phe
Gln	Lys 11330	Ser	Ser	Met	Gly	Pro 11335	Phe	Tyr	Leu	Gly	Cys 11340	Gln	Leu	Ile
Ser	Leu 11345	Arg	Pro	Glu	Lys	Asp 11350	Gly	Ala	Ala		Gly 11355	Val	Asp	Thr
Thr	Cys 11360	Thr	Tyr	His		Asp 11365	Pro	Val	Gly	Pro	Gly 11370	Leu	Asp	Ile
Gln	Gln 11375	Leu	Tyr	Trp		Leu 11380	Ser	Gln	Leu		His 11385	Gly	Val	Thr

C1	† -	61	ъ.	_		_	_							
GIN	Leu 11390	GIY	Phe	e Tyr	. val	Leu 11395		Arg	Asp	Ser	Leu 11400		: Ile	e Asn
Gly	Tyr 11405		Pro	Gln	Asn	Leu 11410		Ile	Arg	Gly	Glu 11415		Gln	ı Ile
Asn	Phe 11420		Ile	· Val		Trp 11425					Pro 11430		Pro	Thr
Ser	Ser 11435	Glu	Tyr	Ile	Thr	Leu 11440	Leu	Arg	Asp	Ile	Gln 11445		Lys	Val
Thr	Thr 11450	Leu	Tyr	Lys	Gly	Ser 11455	Gln	Leu	His	Asp	Thr 11460		Arg	Phe
Cys	Leu 11465	Val	Thr			Thr 11470					Leu 11475		Thr	Val
Lys	Ala 11480	Leu	Phe	Ser	Ser	Asn 11485		Asp	Pro	Ser	Leu 11490		Glu	Gln
Val	Phe 11495	Leu	Asp	Lys	Thr	Leu 11500		Ala	Ser	Phe	His 11505		Leu	Gly
Ser	Thr 11510	Tyr	Gln	Leu	Val	Asp 11515					Glu 11520		Glu	Ser
Ser	Val 11525	Tyr	Gln	Pro	Thr	Ser 11530	Ser	Ser	Ser		Gln 11535		Phe	Tyr
Leu	Asn 11540	Phe	Thr	Ile	Thr	Asn 11545		Pro	Tyr	Ser	Gln 11550		Lys	Ala
Gln	Pro 11555	Gly	Thr			Tyr 11560		Arg		Lys	Arg 11565	Asn	Ile	Glu
Asp	Ala 11570	Leu	Asn	Gln	Leu	Phe 11575	Arg	Asn	Ser	Ser	Ile 11580			Tyr
Phe	Ser 11585	Asp	Cys	Gln	Val	Ser 11590	Thr	Phe	Arg	Ser	Val 11595	Pro	Asn	Arg
His	His 11600	Thr	Gly	Val	Asp	Ser 11605	Leu	Cys	Asn	Phe	Ser 11610	Pro	Leu	Ala
Arg	Arg 11615	Val	Asp	Arg	Val	Ala 11620	Ile	Tyr	Glu	Glu	Phe 11625	Leu	Arg	Met
Thr	Arg 11630	Asn	Gly	Thr	Gln	Leu 11635	Gln	Asn	Phe	Thr	Leu 11640	Asp	Arg	Ser
Ser	Val 11645	Leu	Val	Asp	Gly	Tyr 11650	Ser	Pro	Asn	Arg	Asn 11655	Glu	Pro	Leu
Thr	Gly 11660	Asn	Ser	Asp	Leu	Pro 11665	Phe	Trp	Ala	Val	Ile 11670	Leu	Ile	Gly
Leu	Ala 11675	Gly	Leu	Leu	Gly	Leu 11680	Ile	Thr	Cys	Leu	Ile 11685	Cys	Gly	Val

Leu Val Thr Thr Arg Arg Arg Lys Lys Glu Gly Glu Tyr Asn Val 11690 11695 11700

Gln Gln Gln Cys Pro Gly Tyr Tyr Gln Ser His Leu Asp Leu Glu 11705 11710 11715

Asp Leu Gln 11720

<210> 163

<211> 156

<212> PRT

<213> Homo sapiens

<400> 163

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe 20 25 30

Asn Ala Thr Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys $35 \hspace{1cm} 40 \hspace{1cm} 45$

Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu 50 55 60

Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu 65 70 75 80

Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr 85 90 95

Trp Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr 100 105 110

Ser Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn 115 120 125

Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala 130 135 140

Thr Thr Gly Thr Pro Ser Ser Phe Pro Gly His Thr 145 150 155

<210> 164

<211> 42

<212> PRT

<400> 164

Ala Thr Val Pro Phe Met Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Ala Thr Glu Arg Glu Leu Gln Gly Leu 35

<210> 165

<211> 42

<212> PRT

<213> Homo sapiens

<400> 165

Thr Ala Val Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Gly Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35 40

<210> 166

<211> 42

<212> PRT

<213> Homo sapiens

<400> 166

Val Pro Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Glu Ala Met Arg His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35 40

<211> 42

<212> PRT

<213> Homo sapiens

<400> 167

Ala Pro Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe 20 25 30

Ser Thr Thr Glu Arg Val Leu Gln Gly Leu 35 40

<210> 168

<211> 42

<212> PRT

<213> Homo sapiens

<400> 168

Ala Pro Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35 40

<210> 169

<211> 42

<212> PRT

<213> Homo sapiens

<400> 169

Ala Pro Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Val Asp Met Arg His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu

35 40

<210> 170

<211> 42

<212> PRT

<213> Homo sapiens

<400> 170

Ser Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35 40

<210> 171

<211> 42

<212> PRT

<213> Homo sapiens

<400> 171

Ala Ala Gly Pro Leu Leu Met Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe 20 25 30

Asn Thr Met Glu Ser Val Leu Gln Gly Leu 35 40

<210> 172

<211> 42

<212> PRT

<213> Homo sapiens

<400> 172

Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn Cys Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe 20 25 30

Asn Thr Met Glu Ser Val Leu Gln Gly Leu 35 40

<210> 173

<211> 42

<212> PRT

<213> Homo sapiens

<400> 173

Ala Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Gly Glu Asp Met Gly His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35

<210> 174

<211> 42

<212> PRT

<213> Homo sapiens

<400> 174

Thr Ala Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Gly Glu Asp Met Gly His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35 40

<210> 175

<211> 42

<212> PRT

<213> Homo sapiens

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Gly Glu Asp Met Gly His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35 40

<210> 176

<211> 42

<212> PRT

<213> Homo sapiens

<400> 176

Thr Ala Gly Pro Leu Leu Val Leu Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Lys Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Thr Leu 35 40

<210> 177

<211> 42

<212> PRT

<213> Homo sapiens

<400> 177

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe 20 25 30

Asn Ala Thr Glu Arg Val Leu Gln Gly Leu 35 40

<210> 178

<211> 42

<212> PRT

<400> 178

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Arg Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35 40

<210> 179

<211> 42

<212> PRT

<213> Homo sapiens

<400> 179

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35

<210> 180

<211> 42

<212> PRT

<213> Homo sapiens

<400> 180

Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35

<211> 42

<212> PRT

<213> Homo sapiens

<400> 181

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35 40

<210> 182

<211> 42

<212> PRT

<213> Homo sapiens

<400> 182

Ala Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35

<210> 183

<211> 42

<212> PRT

<213> Homo sapiens

<400> 183

Ser Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu

35 40

<210> 184

<211> 42

<212> PRT

<213> Homo sapiens

<400> 184

Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn Phe Thr Ile Thr 1 5 10 15

Asn Gln Arg Tyr Glu Glu Asn Met His His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35 40

<210> 185

<211> 42

<212> PRT

<213> Homo sapiens

<400> 185

Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Arg Tyr Glu Glu Asn Met His His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35 40

<210> 186

<211> 42

<212> PRT

<213> Homo sapiens

<400> 186

Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35

<210> 187

<211> 42

<212> PRT

<213> Homo sapiens

<400> 187

Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Arg Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35

<210> 188

<211> 42

<212> PRT

<213> Homo sapiens

<400> 188

Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35 40

<210> 189

<211> 42

<212> PRT

<213> Homo sapiens

Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asp Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35 40

<210> 190

<211> 42

<212> PRT

<213> Homo sapiens

<400> 190

Ala Ala Ser Pro Leu Leu Val Leu Phe Thr Leu Asn Gly Thr Ile Thr 1 5 10 15

Asn Leu Arg Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu 35 40

<210> 191

<211> 42

<212> PRT

<213> Homo sapiens

<400> 191

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr 1 5 10 15

Asn Leu Lys Tyr Glu Glu Asp Met His Cys Pro Gly Ser Arg Lys Phe 20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Ser Leu 35 40

<210> 192

<211> 41

<212> PRT

<400> 192

Ala Ala Ser His Leu Leu Ile Leu Phe Thr Leu Asn Phe Thr Ile Thr 1 $$ $$ $$ 15

Asn Leu Arg Tyr Glu Glu Asn Met Trp Pro Gly Ser Arg Lys Phe Asn 20 25 30

Thr Thr Glu Arg Val Leu Gln Gly Leu 35 40

<210> 193

<211> 42

<212> PRT

<213> Homo sapiens

<400> 193

Thr Gly Val Val Ser Glu Glu Pro Phe Thr Leu Asn Phe Thr Ile Asn 1 5 10 15

Asn Leu Arg Tyr Met Ala Asp Met Gly Gln Pro Gly Ser Leu Lys Phe 20 25 30

Asn Ile Thr Asp Asn Val Met Lys His Leu 35 40

<210> 194

<211> 42

<212> PRT

<213> Homo sapiens

<400> 194

Ala Met Gly Tyr His Leu Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser 1 5 10 15

Asn Leu Gln Tyr Ser Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn 20 25 30

Ser Thr Glu Gly Val Leu Gln His Leu Leu 35 40

<212> PRT

```
<211> 23
 <212>
       PRT
 <213> Homo sapiens
 <400> 195
 Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu Tyr Ser Gly
 Cys Arg Leu Ala Ser Leu Arg
<210> 196
<211> 23
<212> PRT
<213> Homo sapiens
<400> 196
Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly
Cys Arg Leu Thr Leu Leu Arg
            20
<210> 197
<211> 23
<212> PRT
<213> Homo sapiens
<400> 197
Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
                5
Cys Arg Leu Thr Leu Leu Arg
           20
<210> 198
<211> 23
```

<400> 198

Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly 1 5 10 15

Cys Arg Leu Thr Leu Leu Arg 20

<210> 199

<211> 23

<212> PRT

<213> Homo sapiens

<400> 199

Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Ser 1 5 10 15

Cys Arg Leu Thr Leu Leu Arg 20

<210> 200

<211> 23

<212> PRT

<213> Homo sapiens

<400> 200

Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$

Cys Arg Leu Thr Ser Leu Arg 20

<210> 201

<211> 23

<212> PRT

<213> Homo sapiens

Leu Gly Pro Ile Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg 20 <210> 202 <211> 23 <212> PRT <213> Homo sapiens <400> 202 Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg 20 <210> 203 <211> 23 <212> PRT <213> Homo sapiens <400> 203 Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg <210> 204 <211> 23 <212> PRT <213> Homo sapiens <400> 204 Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly 5 Cys Arg Leu Thr Ser Leu Arg

20

<212> PRT

<213> Homo sapiens

<400> 205

Leu Gly Pro Leu Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly 1 5 10 15

Cys Arg Leu Ile Ser Leu Arg 20

<210> 206

<211> 23

<212> PRT

<213> Homo sapiens

<400> 206

Leu Gly Pro Leu Phe Lys Asn Ser Ser Val Asp Pro Leu Tyr Ser Gly
1 10 15

Cys Arg Leu Thr Ser Leu Arg 20

<210> 207

<211> 23

<212> PRT

<213> Homo sapiens

<400> 207

Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly 1 5 10 15

Cys Arg Leu Thr Ser Leu Arg

<210> 208

[]

```
<211> 23
<212> PRT
<213> Homo sapiens
<400> 208
Leu Ser Pro Ile Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
Cys Arg Leu Thr Leu Leu Arg
<210> 209
<211> 23
<212> PRT
<213> Homo sapiens
<400> 209
Leu Ser Pro Leu Phe Gln Arg Ser Ser Leu Gly Ala Arg Tyr Thr Gly
Cys Arg Val Ile Ala Leu Arg
            20
<210> 210
<211> 23
<212> PRT
<213> Homo sapiens
<400> 210
Leu Arg Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly
               5
Cys Arg Leu Thr Leu Leu Arg
            20
<210> 211
<211> 23
<212> PRT
```

<400> 211

Leu Arg Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Ser Arg Leu Thr Leu Leu Arg 20

<210> 212

<211> 23

<212> PRT

<213> Homo sapiens

<400> 212

Leu Arg Pro Leu Phe Lys Asn Thr Ser Ile Gly Pro Leu Tyr Ser Ser 1 10 15

Cys Arg Leu Thr Leu Leu Arg

<210> 213

<211> 23

<212> PRT

<213> Homo sapiens

<400> 213

Leu Arg Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$

Cys Arg Leu Thr Leu Leu Arg 20

<210> 214

<211> 23

<212> PRT

<213> Homo sapiens

Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg <210> 215 <211> 23 <212> PRT <213> Homo sapiens <400> 215 Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg 20 <210> 216 <211> 23 <212> PRT <213> Homo sapiens <400> 216 Leu Arg Ser Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly 10 Cys Arg Leu Thr Leu Leu Arg 20 <210> 217 <211> 23 <212> PRT <213> Homo sapiens <400> 217 Leu Arg Ser Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly

10

Cys Arg Leu Thr Ser Leu Arg

<210> 218 <211> 23 <212> PRT

<213> Homo sapiens

<400> 218

Leu Thr Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$

Cys Arg Leu Thr Leu Leu Arg 20

<210> 219

<211> 23

<212> PRT

<213> Homo sapiens

<400> 219

Leu Thr Pro Leu Phe Arg Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$

Cys Arg Leu Thr Leu Leu Arg 20

<210> 220

<211> 23

<212> PRT

<213> Homo sapiens

<400> 220

Leu Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$

Cys Arg Leu Thr Leu Leu Arg 20

<211> 22

<212> PRT

<213> Homo sapiens

<400> 221

Arg Pro Leu Phe Gln Lys Ser Ser Met Gly Pro Phe Tyr Leu Gly Cys 1 5 10 15

Gln Leu Ile Ser Leu Arg 20

<210> 222

<211> 58

<212> PRT

<213> Homo sapiens

<400> 222

Pro Glu Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His 1 5 10 15

Arg Pro Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp 20 25 30

Glu Leu Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly 50

<210> 223

<211> 58

<212> PRT

<213> Homo sapiens

<400> 223

Pro Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His 1 5 10 15

Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly 50

<210> 224

<211> 58

<212> PRT

<213> Homo sapiens

<400> 224

(n Ln

Pro Lys Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His 1 5 10 15

Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp 20 25 30

Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly 50 55

<210> 225

<211> 58

<212> PRT

<213> Homo sapiens

<400> 225

Pro Glu Lys Asp Gly Thr Ala Thr Gly Val Asp Ala Ile Cys Thr His 1 5 10 15

His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu Gln Leu Tyr Trp 20 25 30

Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly His Tyr Ala 35 40 45

Leu Asp Asn Asp Ser Leu Phe Val Asn Gly 50

<210> 226

<211> 58

<212> PRT

<213> Homo sapiens

<400> 226

Pro Glu Lys Asp Gly Glu Ala Thr Gly Val Asp Ala Ile Cys Thr His 1 5 10 15

Arg Pro Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Gln Leu Tyr Leu 20 25 30

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly 50

<210> 227

<211> 58

<212> PRT

<213> Homo sapiens

<400> 227

Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr 1 5 10 15

His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp 20 25 30

Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser 35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly 50 55

<210> 228

<211> 58

<212> PRT

<213> Homo sapiens

<400> 228

Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr 1 5 10 10

His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Cys 20 25 30

Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser 35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly 50

<210> 229

<211> 58

<212> PRT

<213> Homo sapiens

<400> 229

Pro Glu Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Ala Cys Thr Tyr 1 5 10 15

Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp 20 25 30

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg Val Ser Leu Tyr Val Asn Gly 50 55

<210> 230

<211> 58

<212> PRT

<213> Homo sapiens

<400> 230

Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr 1 5 10 15

Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr 35 40 45

Gln Asp Arg Asp Ser Leu Tyr Val Asn Gly 50

<210> 231

<211> 58

<212> PRT

<213> Homo sapiens

<400> 231

Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr 1 5 10 15

Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp 20 25 30

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr 35 40 45

Gln Asp Arg Asp Ser Leu Tyr Asn Val Gly 50

<210> 232

<211> 58

<212> PRT

<213> Homo sapiens

<400> 232

Pro Glu Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Val Cys Thr His $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp 20 25 30

Lys Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg His Ser Leu Tyr Val Asn Gly 50 55

<210> 233

<211> 58

<212> PRT

<213> Homo sapiens

<400> 233

Pro Glu Lys Asp Gly Val Ala Thr Arg Val Asp Ala Ile Cys Thr His 1 10 15

Arg Pro Asp Pro Lys Ile Pro Gly Leu Asp Arg Gln Gln Leu Tyr Trp 20 25 30

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly 50 55

<210> 234

<211> 58

<212> PRT

<213> Homo sapiens

<400> 234

His Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Arg Leu Tyr Trp 20 25 30

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly 50

<210> 235

<211> 58

<212> PRT

<213> Homo sapiens

<400> 235

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His 1 5 10 15

Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp 20 25 30

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly 50

<210> 236

<211> 58

<212> PRT

<213> Homo sapiens

<400> 236

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His 1 10 15

Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly 50

<210> 237

<211> 58

<212> PRT

<213> Homo sapiens

<400> 237

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His 1 5 10 15

Arg Val Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp 20 25 30

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly 50 55

<210> 238

<211> 58

<212> PRT

<213> Homo sapiens

<400> 238

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His

Arg Leu Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp 20 25 30

Glu Leu Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu 35 40 45

Leu Asp Arg Gly Ser Leu Tyr Val Asn Gly 50 55

<210> 240

<211> 58

<212> PRT

<213> Homo sapiens

<400> 240

Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys Ser His 1 $$ 5 $$ 10 $$ 15

Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp 20 25 30

Glu Leu Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly 50

```
<210> 241
```

<211> 58

<212> PRT

<213> Homo sapiens

<400> 241

Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys Ser His 1 $$ 5 $$ 10 $$ 15

Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp 20 25 30

Glu Leu Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly 50

<210> 242

<211> 58

<212> PRT

<213> Homo sapiens

<400> 242

Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu 1 5 10 15

Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp 20 25 30

Glu Leu Ser Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly 50 55

<210> 243

<211> 58

<212> PRT

<213> Homo sapiens

<400> 243

Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu 5 10 15

Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp 20 25 30

Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly 50

<210> 244

<211> 58

<212> PRT

<213> Homo sapiens

<400> 244

Pro Glu Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His 1 5101515

Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp 20 25 30

Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly 50

<210> 245

<211> 58

<212> PRT

<213> Homo sapiens

<400> 245

Pro Glu Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His 1 $$ 5 $$ 10 $$ 15

Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp 20 25 30

Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly

50 55

<210> 246

<211> 58

<212> PRT

<213> Homo sapiens

<400> 246

Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp 20 25 30

Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asp Gly 50

<210> 247

<211> 58

<212> PRT

<213> Homo sapiens

<400> 247

Pro Glu Lys Asp Lys Ala Ala Thr Arg Val Asp Ala Ile Cys Thr His 1 $$ 5 $$ 10 $$ 15

His Pro Asp Pro Gln Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp 20 25 30

Glu Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr 35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asp Gly 50

<210> 248

<211> 58

<212> PRT

<213> Homo sapiens

<400> 248

Ser Val Lys Asn Gly Ala Glu Thr Arg Val Asp Leu Leu Cys Thr Tyr $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Leu Gln Pro Leu Ser Gly Pro Gly Leu Pro Ile Lys Gln Val Phe His 20 25 30

Glu Leu Ser Gln Gln Thr His Gly Ile Thr Arg Leu Gly Pro Tyr Ser 35 40 45

Leu Asp Lys Asp Ser Leu Tyr Leu Asn Gly 50

<210> 249

<211> 58

<212> PRT

<213> Homo sapiens

<400> 249

Pro Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Thr Thr Cys Thr Tyr 1 5 10 15

His Pro Asp Pro Val Gly Pro Gly Leu Asp Ile Gln Gln Leu Tyr Trp 20 25 30

Glu Leu Ser Gln Leu Thr His Gly Val Thr Gln Leu Gly Phe Tyr Val 35 40 45

Leu Asp Arg Asp Ser Leu Phe Ile Asn Gly 50

<210> 250

<211> 12

<212> PRT

<213> Homo sapiens

<400> 250

Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr 1 5 10

<210> 251

<211> 12

<212> PRT

<213> Homo sapiens

<400> 251

<210> 252

<211> 12

<212> PRT

<213> Homo sapiens

<400> 252

<210> 253

<211> 12

<212> PRT

<213> Homo sapiens

<400> 253

Phe Thr His Arg Thr Ser Val Pro Thr Thr Ser Thr 1 $$ 5 $$ 10

<210> 254

<211> 12

<212> PRT

<213> Homo sapiens

<400> 254

Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ser $1 \hspace{1cm} 5 \hspace{1cm} 10$

<210> 255

<211> 12

<212> PRT

<213> Homo sapiens

<400> 255

Phe Thr His Arg Ser Ser Val Ser Thr Thr Ser Thr 1 5 10

<210> 256

<211> 12

<212> PRT

<213> Homo sapiens

<400> 256

Phe Thr His Arg Ser Ser Val Ala Pro Thr Ser Thr $1 \hspace{1cm} 5 \hspace{1cm} 10$

<210> 257

<211> 12

<212> PRT

<213> Homo sapiens

<400> 257

Phe Thr His Arg Ser Ser Gly Leu Thr Thr Ser Thr $1 \hspace{1cm} 5 \hspace{1cm} 10$

<210> 258

<211> 12

<212> PRT

<213> Homo sapiens

<400> 258

<210> 259 <211> 12 <212> PRT <213> Homo sapiens <400> 259 Phe Thr His Arg Ser Ser Phe Leu Thr Thr Ser Thr <210> 260 <211> 12 <212> PRT <213> Homo sapiens <400> 260 Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr 10 <210> 261 <211> 12 <212> PRT <213> Homo sapiens <400> 261 Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile 5 <210> 262 <211> 12 <212> PRT <213> Homo sapiens <400> 262 Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr

<210> 263

<211> 12

<212> PRT

<213> Homo sapiens

<400> 263

<210> 264

<211> 12

<212> PRT

<213> Homo sapiens

<400> 264

Phe Thr His Gln Thr Phe Ala Pro Asn Thr Ser Thr $1 \hspace{1cm} 5 \hspace{1cm} 10$

<210> 265

<211> 12

<212> PRT

<213> Homo sapiens

<400> 265

<210> 266

<211> 12

<212> PRT

<213> Homo sapiens

<400> 266

Phe Thr His Gln Ser Ser Met Thr Thr Arg Thr

<400> 270

1 5 10 <210> 267 <211> 12 <212> PRT <213> Homo sapiens <400> 267 Phe Thr His Trp Ile Pro Val Pro Thr Ser Ser Thr 5 <210> 268 <211> 12 <212> PRT <213> Homo sapiens <400> 268 Phe Thr His Trp Ser Pro Ile Pro Thr Thr Ser Thr <210> 269 <211> 12 <212> PRT <213> Homo sapiens <400> 269 Phe Thr His Trp Ser Ser Gly Leu Thr Thr Ser Thr <210> 270 <211> 12 <212> PRT <213> Homo sapiens

Phe His Pro Arg Ser Ser Val Pro Thr Thr Ser Thr $1 \hspace{1cm} 5 \hspace{1cm} 10$

<210> 271

<211> 12

<212> PRT

<213> Homo sapiens

<400> 271

Phe Asn Pro Arg Ser Ser Val Pro Thr Thr Ser Thr $1 \hspace{1cm} 5 \hspace{1cm} 10$

<210> 272

<211> 12

<212> PRT

<213> Homo sapiens

<400> 272

Phe Asn Pro Trp Ser Ser Val Pro Thr Thr Ser Thr 1 5 10

<210> 273

<211> 12

<212> PRT

<213> Homo sapiens

<400> 273

Phe Thr Gln Arg Ser Ser Val Pro Thr Thr Ser Ile 1 5 10

<210> 274

<211> 12

<212> PRT

<213> Homo sapiens

<400> 274

Phe Thr Gln Arg Ser Ser Val Pro Thr Thr Ser Thr <210> 275 <211> 12 <212> PRT <213> Homo sapiens <400> 275 Phe Thr Gln Arg Ser Ser Val Pro Thr Thr Ser Val 5 <210> 276 <211> 12 <212> PRT <213> Homo sapiens <400> 276 Tyr Asn Glu Pro Gly Leu Asp Glu Pro Pro Thr Thr <210> 277 <211> 12 <212> PRT <213> Homo sapiens <400> 277 Tyr Ala Pro Gln Asn Leu Ser Ile Arg Gly Glu Tyr <210> 278 <211> 21 <212> PRT

<213> Homo sapiens

<400> 278

Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser Ser 1 10 15

Ser Pro Ser Pro Thr 20

<210> 279

<211> 23

<212> PRT

<213> Homo sapiens

<400> 279

Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser 1 5 10 15

Leu Ser Ser Pro Thr Ile Met 20

<210> 280

<211> 21

<212> PRT

<213> Homo sapiens

<400> 280

Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Phe Ser 1 $$ 5 $$ 10 $$ 15

Leu Pro Ser Pro Ala 20

<210> 281

<211> 20

<212> PRT

<213> Homo sapiens

<400> 281

Pro Gly Thr Ser Thr Val Asp Leu Gly Ser Gly Thr Pro Ser Ser Leu 1 5 10 15

Pro Ser Pro Thr 20 <210> 282 <211> 20 <212> PRT <213> Homo sapiens <400> 282 Pro Gly Thr Ser Thr Val Asp Leu Gly Ser Gly Thr Pro Ser Leu Pro Ser Ser Pro Thr 20 <210> 283 <211> 21 <212> PRT <213> Homo sapiens <400> 283 Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr 20 <210> 284 <211> 21 <212> PRT <213> Homo sapiens <400> 284 Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Val Ser 10 Lys Pro Gly Pro Ser <210> 285

<211> 21 <212> PRT

<213> Homo sapiens

<400> 285

Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro 1 5 10 15

Val Pro Ser Pro Thr 20

<210> 286

<211> 21

<212> PRT

<213> Homo sapiens

<400> 286

Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser 1 10 15

Phe Pro Gly His Thr 20

<210> 287

<211> 21

<212> PRT

<213> Homo sapiens

<400> 287

Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser 1 5 10 15

Leu Pro Gly His Thr 20

<210> 288

<211> 21

<212> PRT

<213> Homo sapiens

<400> 288

Leu Pro Gly His Thr 20

<210> 289

<211> 21

<212> PRT

<213> Homo sapiens

<400> 289

Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$

Leu Ser Gly Pro Thr 20

<210> 290

<211> 21

<212> PRT

<213> Homo sapiens

<400> 290

Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$

Leu Pro Gly His Thr 20

<210> 291

<211> 21

<212> PRT

<213> Homo sapiens

<400> 291

Pro Gly Thr Ser Ala Val His Leu Glu Thr Thr Gly Thr Pro Ser Ser 1 5 10 15

Phe Pro Gly His Thr 20

<210> 292

<211> 21

<212> PRT

<213> Homo sapiens

<400> 292

Leu Pro Arg Pro Ile 20

<210> 293

<211> 21

<212> PRT

<213> Homo sapiens

<400> 293

Pro Gly Thr Ser Ile Val Asn Leu Gly Thr Ser Gly Ile Pro Pro Ser $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$

Leu Pro Glu Thr Thr 20

<210> 294

<211> 21

<212> PRT

<213> Homo sapiens

<400> 294

Pro Gly Thr Phe Thr Val Gln Pro Glu Thr Ser Glu Thr Pro Ser Ser 1 5 10 15

Leu Pro Gly Pro Thr

<210> 295 <211> 21 <212> PRT <213> Homo sapiens

<400> 295

Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Val Ser 1 5 10 15

Lys Pro Gly Pro Ser 20

<210> 296

<211> 21

<212> PRT

<213> Homo sapiens

<400> 296

Pro Gly Thr Pro Thr Val Tyr Leu Gly Ala Ser Lys Thr Pro Ala Ser 1 5 10 15

Ile Phe Gly Pro Ser

<210> 297

<211> 16

<212> PRT

<213> Homo sapiens

<400> 297

Pro Lys Pro Ala Thr Thr Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr 1 5 10 15

<210> 298

<211> 21

<212> PRT

<213> Homo sapiens

<400> 298

Gln Ile Asn Phe His Ile Val Asn Trp Asn Leu Ser Asn Pro Asp Pro 1 5 10 15

Thr Ser Ser Glu Tyr 20

<210> 299

<211> 1794

<212> PRT

<213> Homo sapiens

<400> 299

Met Glu His Ile Thr Lys Ile Pro Asn Glu Ala Ala His Arg Gly Thr 1 5 10 15

Ile Arg Pro Val Lys Gly Pro Gln Thr Ser Thr Ser Pro Ala Ser Pro 20 25 30

Lys Gly Leu His Thr Gly Gly Thr Lys Arg Met Glu Thr Thr Thr 35 40 45

Ala Leu Lys Thr Thr Thr Thr Ala Leu Lys Thr Thr Ser Arg Ala Thr 50 55 60

Leu Thr Thr Ser Val Tyr Thr Pro Thr Leu Gly Thr Leu Thr Pro Leu 65 70 75 80

Asn Ala Ser Arg Gln Met Ala Ser Thr Ile Leu Thr Glu Met Met Ile $85 \hspace{1cm} 90 \hspace{1cm} 95$

Thr Thr Pro Tyr Val Phe Pro Asp Val Pro Glu Thr Thr Ser Ser Leu 100 105 110

Ala Thr Ser Leu Gly Ala Glu Thr Ser Thr Ala Leu Pro Arg Thr Thr 115 120 125

Pro Ser Val Leu Asn Arg Glu Ser Glu Thr Thr Ala Ser Leu Val Ser 130 135 140

Arg Ser Gly Ala Glu Arg Ser Pro Val Ile Gln Thr Leu Asp Val Ser 145 150 155 160

Ser Ser Glu Pro Asp Thr Thr Ala Ser Trp Val Ile His Pro Ala Glu 165 170 175

Thr Ile Pro Thr Val Ser Lys Thr Thr Pro Asn Phe Phe His Ser Glu 180 185 190

Leu	Asp	Thr 195	Val	Ser	Ser	Thr	Ala 200	Thr	Ser	His	Gly	Ala 205	Asp	Val	Ser
Ser	Ala 210	Ile	Pro	Thr	Asn	Ile 215	Ser	Pro	Ser	Glu	Leu 220	Asp	Ala	Leu	Thr
Pro 225	Leu	Val	Thr	Ile	Ser 230	Gly	Thr	Asp	Thr	Ser 235	Thr	Thr	Phe	Pro	Thr 240
Leu	Thr	Lys	Ser	Pro 245	His	Glu	Thr	Glu	Thr 250	Arg	Thr	Thr	Trp	Leu 255	Thr
His	Pro	Ala	Glu 260	Thr	Ser	Ser	Thr	Ile 265	Pro	Arg	Thr	Ile	Pro 270	Asn	Phe
Ser	His	His 275	Glu	Ser	Asp	Ala	Thr 280	Pro	Ser	Ile	Ala	Thr 285	Ser	Pro	Gly
Ala	Glu 290	Thr	Ser	Ser	Ala	Ile 295	Pro	Ile	Met	Thr	Val 300	Ser	Pro	Gly	Ala
Glu 305	Asp	Leu	Val	Thr	Ser 310	Gln	Val	Thr	Ser	Ser 315	Gly	Thr	Asp	Arg	Asn 320
Met	Thr	Ile	Pro	Thr 325	Leu	Thr	Leu	Ser	Pro 330	Gly	Glu	Pro	Lys	Thr 335	Ile
Ala	Ser	Leu	Val 340	Thr	His	Pro	Glu	Ala 345	Gln	Thr	Ser	Ser	Ala 350	Ile	Pro
Thr	Ser	Thr 355	Ile	Ser	Pro	Ala	Val 360	Ser	Arg	Leu	Val	Thr 365	Ser	Met	Val
Thr	Ser 370	Leu	Ala	Ala	Lys	Thr 375	Ser	Thr	Thr	Asn	Arg 380	Ala	Leu	Thr	Asn
Ser 385	Pro	Gly	Glu	Pro	Ala 390	Thr	Thr	Val	Ser	Leu 395	Val	Thr	His	Pro	Ala 400
Gln	Thr	Ser	Pro	Thr 405		Pro	_		Thr 410		Ile	Phe	Phe	His 415	Ser
Lys	Ser	Asp	Thr 420	Thr	Pro	Ser	Met	Thr 425	Thr	Ser	His	Gly	Ala 430	Glu	Ser
Ser	Ser	Ala 435	Val	Pro	Thr	Pro	Thr 440	Val	Ser	Thr	Glu	Val 445	Pro	Gly	Val
Val	Thr 450	Pro	Leu	Val	Thr	Ser 455	Ser	Arg	Ala	Val	Ile 460	Ser	Thr	Thr	Ile
Pro 465	Ile	Leu	Thr	Leu	Ser 470	Pro	Gly	Glu	Pro	Glu 475	Thr	Thr	Pro	Ser	Met 480
Ala	Thr	Ser	His	Gly 485	Glu	Glu	Ala	Ser	Ser 490	Ala	Ile	Pro	Thr	Pro 495	Thr
Val	Ser	Pro	Gly	Val	Pro	Gly	Val	Val	Thr	Ser	Leu	Val	Thr	Ser	Ser

500 505 510 Arg Ala Val Thr Ser Thr Thr Ile Pro Ile Leu Thr Phe Ser Leu Gly 520 Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Thr Glu Ala 535 Gly Ser Ala Val Pro Thr Val Leu Pro Glu Val Pro Gly Met Val Thr 550 555 Ser Leu Val Ala Ser Ser Arg Ala Val Thr Ser Thr Thr Leu Pro Thr 565 570 Leu Thr Leu Ser Pro Gly Glu Pro Glu Thr Thr Pro Ser Met Ala Thr 585 Ser His Gly Ala Glu Ala Ser Ser Thr Val Pro Thr Val Ser Pro Glu 600 Val Pro Gly Val Val Thr Ser Leu Val Thr Ser Ser Gly Val Asn 615 Ser Thr Ser Ile Pro Thr Leu Ile Leu Ser Pro Gly Glu Leu Glu Thr 630 Thr Pro Ser Met Ala Thr Ser His Gly Ala Glu Ala Ser Ser Ala Val 645 Pro Thr Pro Thr Val Ser Pro Gly Val Ser Gly Val Val Thr Pro Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr Thr Ile Pro Ile Leu Thr 675 685 Leu Ser Ser Ser Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His 695 Gly Val Glu Ala Ser Ser Ala Val Leu Thr Val Ser Pro Glu Val Pro 705 710 715 Gly Met Val Thr Ser Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr 730 Thr Ile Pro Thr Leu Thr Ile Ser Ser Asp Glu Pro Glu Thr Thr 740 745 Ser Leu Val Thr His Ser Glu Ala Lys Met Ile Ser Ala Ile Pro Thr Leu Ala Val Ser Pro Thr Val Gln Gly Leu Val Thr Ser Leu Val Thr 770 Ser Ser Gly Ser Glu Thr Ser Ala Phe Ser Asn Leu Thr Val Ala Ser Ser Gln Pro Glu Thr Ile Asp Ser Trp Val Ala His Pro Gly Thr Glu 810

Ala Ser Ser Val Val Pro Thr Leu Thr Val Ser Thr Gly Glu Pro Phe 820 825 Thr Asn Ile Ser Leu Val Thr His Pro Ala Glu Ser Ser Ser Thr Leu 840 Pro Arg Thr Thr Ser Arg Phe Ser His Ser Glu Leu Asp Thr Met Pro 855 Ser Thr Val Thr Ser Pro Glu Ala Glu Ser Ser Ser Ala Ile Ser Thr 870 875 Thr Ile Ser Pro Gly Ile Pro Gly Val Leu Thr Ser Leu Val Thr Ser 885 Ser Gly Arg Asp Ile Ser Ala Thr Phe Pro Thr Val Pro Glu Ser Pro 905 His Glu Ser Glu Ala Thr Ala Ser Trp Val Thr His Pro Ala Val Thr 920 925 Ser Thr Thr Val Pro Arg Thr Thr Pro Asn Tyr Ser His Ser Glu Pro 935 Asp Thr Thr Pro Ser Ile Ala Thr Ser Pro Gly Ala Glu Ala Thr Ser 945 950 955 Asp Phe Pro Thr Ile Thr Val Ser Pro Asp Val Pro Asp Met Val Thr 965 970 Ser Gln Val Thr Ser Ser Gly Thr Asp Thr Ser Ile Thr Ile Pro Thr 980 985 Leu Thr Leu Ser Ser Gly Glu Pro Glu Thr Thr Thr Ser Phe Ile Thr 995 1000 Tyr Ser Glu Thr His Thr Ser Ser Ala Ile Pro Thr Leu Pro Val 1010 1015 1020 Ser Pro Gly Ala Ser Lys Met Leu Thr Ser Leu Val Ile Ser Ser 1025 1030 Gly Thr Asp Ser Thr Thr Thr Phe Pro Thr Leu Thr Glu Thr Pro 1045 1050 Tyr Glu Pro Glu Thr Thr Ala Ile Gln Leu Ile His Pro Ala Glu 1055 1060 Thr Asn Thr Met Val Pro Arg Thr Thr Pro Lys Phe Ser His Ser 1070 1075 1080 Lys Ser Asp Thr Thr Leu Pro Val Ala Ile Thr Ser Pro Gly Pro 1085 1090 1095 Glu Ala Ser Ser Ala Val Ser Thr Thr Thr Ile Ser Pro Asp Met 1105 1110 Ser Asp Leu Val Thr Ser Leu Val Pro Ser Ser Gly Thr Asp Thr 1115 1120 1125

Ser	Thr 1130	Thr	Phe	Pro	Thr	Leu 1135		Glu	Thr	Pro	Tyr 1140		Pro	Glu
Thr	Thr 1145		Thr	Trp	Leu	Thr 1150		Pro	Ala	Glu	Thr 1155		Thr	Thr
Val	Ser 1160		Thr	Ile	Pro	Asn 1165		Ser	His	Arg	Gly 1170		Asp	Thr
Ala	Pro 1175	Ser	Met	Val	Thr	Ser 1180		Gly	Val	Asp	Thr 1185	_	Ser	Gly
Val	Pro 1190		Thr	Thr	Ile	Pro 1195		Ser	Ile	Pro	Gly 1200		Val	Thr
Ser	Gln 1205		Thr	Ser	Ser	Ala 1210		Asp	Thr	Ser	Thr 1215	Ala	Ile	Pro
Thr	Leu 1220		Pro	Ser	Pro	Gly 1225		Pro	Glu	Thr	Thr 1230	Ala	Ser	Ser
Ala	Thr 1235	His	Pro	Gly	Thr	Gln 1240	Thr	Gly	Phe	Thr	Val 1245	Pro	Ile	Arg
Thr	Val 1250	Pro	Ser	Ser	Glu	Pro 1255		Thr	Met	Ala	Ser 1260	Trp	Val	Thr
His	Pro 1265	Pro	Gln	Thr	Ser	Thr 1270		Val	Ser	Arg	Thr 1275	Thr	Ser	Ser
Phe	Ser 1280	His	Ser	Ser	Pro	Asp 1285	Ala	Thr	Pro	Val	Met 1290	Ala	Thr	Ser
Pro	Arg 1295	Thr	Glu	Ala	Ser	Ser 1300	Ala	Val	Leu	Thr	Thr 1305	Ile	Ser	Pro
Gly	Ala 1310	Pro	Glu	Met	Val	Thr 1315	Ser	Gln	Ile	Thr	Ser 1320	Ser	Gly	Ala
Ala	Thr 1325					Pro 1330					Ser 1335	Pro	Gly	Met
Pro	Glu 1340	Thr	Thr	Ala	Leu	Leu 1345	Ser	Thr	His	Pro	Arg 1350	Thr	Glu	Thr
Ser	Lys 1355	Thr	Phe	Pro	Ala	Ser 1360	Thr	Val	Phe	Pro	Gln 1365	Val	Ser	Glu
Thr	Thr 1370	Ala	Ser	Leu	Thr	Ile 1375	Arg	Pro	Gly	Ala	Glu 1380	Thr	Ser	Thr
Ala	Leu 1385	Pro	Thr	Gln	Thr	Thr 1390	Ser	Ser	Leu	Phe	Thr 1395	Leu	Leu	Val
Thr	Gly 1400	Thr	Ser	Arg	Val	Asp 1405	Leu	Ser	Pro	Thr	Ala 1410	Ser	Pro	Gly
Val	Ser	Ala	Lys	Thr	Ala	Pro	Leu	Ser	Thr	His	Pro	Gly	Thr	Glu

	1415	•				1420)				1425	5		
Thr	Ser 1430		Met	Ile	Pro	Thr 1435		Thr	Leu	Ser	Leu 1440		/ Leu	. Leu
Glu	Thr 1445	Thr	Gly	Leu	Leu	Ala 1450		Ser	Ser	Ser	Ala 1455		Thr	Ser
Thr	Ser 1460		Leu	Thr	Leu	Thr 1465		Ser	Pro	Ala	Val 1470		Gly	Leu
Ser	Ser 1475		Ser	Ile	Thr	Thr 1480		Lys	Pro	Gln	Thr 1485		Thr	Ser
Trp	Asn 1490	Thr	Glu	Thr	Ser	Pro 1495		Val	Thr	Ser	Val 1500		Pro	Pro
Glu	Phe 1505		Arg	Thr	Val	Thr 1510		Thr	Thr	Met	Thr 1515		Ile	Pro
Ser	Glu 1520	Met	Pro	Thr	Pro	Pro 1525		Thr	Ser	His	Gly 1530		Gly	Val
Ser	Pro 1535		Thr	Ile	Leu	Arg 1540		Thr	Met		Glu 1545		Thr	Asn
Leu	Ala 1550		Thr	Gly	Ser	Ser 1555		Thr	Val	Ala	Lys 1560		Thr	Thr
Thr	Phe 1565	Asn	Thr	Leu	Ala	Gly 1570	Ser	Leu	Phe	Thr	Pro 1575		Thr	Thr
Pro	Gly 1580	Met	Ser	Thr	Leu	Ala 1585	Ser	Glu	Ser	Val	Thr 1590		Arg	Thr
Ser	Tyr 1595		His	Arg	Ser	Trp 1600	Ile	Ser	Thr	Thr	Ser 1605	Ser	Tyr	Asn
Arg	Arg 1610	Tyr	Trp	Thr	Pro	Ala 1615	Thr	Ser	Thr	Pro	Val 1620	Thr	Ser	Thr
Phe	Ser 1625	Pro	Gly	Ile	Ser	Thr 1630	Ser	Ser	Ile	Pro	Ser 1635	Ser	Thr	Ala
Ala	Thr 1640	Val	Pro	Phe	Met	Val 1645	Pro	Phe	Thr	Leu	Asn 1650	Phe	Thr	Ile
Thr	Asn 1655	Leu	Gln	Tyr	Glu	Glu 1660	Asp	Met	Arg	His	Pro 1665	Gly	Ser	Arg
Lys	Phe 1670	Asn	Ala	Thr	Glu	Arg 1675	Glu	Leu	Gln	Gly	Leu 1680	Leu	Lys	Pro
Leu	Phe 1685	Arg	Asn	Ser	Ser	Leu 1690	Glu	Tyr	Leu	Tyr	Ser 1695	Gly	Cys	Arg
Leu	Ala 1700	Ser	Leu	Arg	Pro	Glu 1705	Lys	Asp	Ser	Ser	Ala 1710	Met	Ala	Val

Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu Asp Leu Gly Leu 1720 1715 Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn Leu Thr Asn Gly 1730 1735 Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr 1745 1750 Val Asn Gly Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr 1765 1770 Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser 1780 1785 1775 Ser Ser Pro Ser Pro Thr 1790 <210> 300 <211> 284 <212> PRT <213> Homo sapiens <400> 300 Ile Thr Leu Leu Arg Asp Ile Gln Asp Lys Val Thr Thr Leu Tyr Lys Gly Ser Gln Leu His Asp Thr Phe Arg Phe Cys Leu Val Thr Asn Leu Thr Met Asp Ser Val Leu Val Thr Val Lys Ala Leu Phe Ser Ser Asn 40 Leu Asp Pro Ser Leu Val Glu Gln Val Phe Leu Asp Lys Thr Leu Asn Ala Ser Phe His Trp Leu Gly Ser Thr Tyr Gln Leu Val Asp Ile His 7.0 Val Thr Glu Met Glu Ser Ser Val Tyr Gln Pro Thr Ser Ser Ser Thr Gln His Phe Tyr Leu Asn Phe Thr Ile Thr Asn Leu Pro Tyr Ser 105 Gln Asp Lys Ala Gln Pro Gly Thr Thr Asn Tyr Gln Arg Asn Lys Arg 120 115 Asn Ile Glu Asp Ala Leu Asn Gln Leu Phe Arg Asn Ser Ser Ile Lys 140 135 Ser Tyr Phe Ser Asp Cys Gln Val Ser Thr Phe Arg Ser Val Pro Asn

155

150

<400> 302 tagctgctct ctgtccagtc c

					165					170					175		
Ž	Arg	Arg	Val	Asp 180	Arg	Val	Ala	Ile	Tyr 185	Glu	Glu	Phe	Leu	Arg 190	Met	Thr	
i	Arg	Asn	Gly 195	Thr	Gln	Leu	Gln	Asn 200	Phe	Thr	Leu	Asp	Arg 205	Ser	Ser	Val	
	Leu	Val 210	Asp	Gly	Tyr	Ser	Pro 215	Asn	Arg	Asn	Glu	Pro 220	Leu	Thr	Gly	Asn	
	Ser 225	Asp	Leu	Pro	Phe	Trp 230	Ala	Val	Ile	Leu	Ile 235	Gly	Leu	Ala	Gly	Leu 240	
	Leu	Gly	Leu	Ile	Thr 245	Cys	Leu	Ile	Cys	Gly 250	Val	Leu	Val	Thr	Thr 255	Arg	
	Arg	Arg	Lys	Lys 260	Glu	Gly	Glu	Tyr	Asn 265	Val	Gln	Gln	Gln	Cys 270	Pro	Gly	
,	Tyr	Tyr	Gln 275	Ser	His	Leu	Asp	Leu 280	Glu	Asp	Leu	Gln					
	<210)> :	301														
	<211	L> 2	24														
	<212	2> !	ANC														
	<213	3> <i>I</i>	Arti	ficia	al Se	equer	nce										
	<220)>															
	<223	3> :	Syntl	netio	c pr	imer											
	<400 gtct		301 tgt (caat	ggttl	tc ad	ccc										24
	<210	0> :	302														
	<21	1> :	21														
	<212	2> 1	DNA														
	<213	3> 2	Arti	fici	al Se	equei	nce										
	<220	O>															
	<223	3> :	Syntl	heti	c pr	imer											

	<210>	303	
	<211>	22	
	<212>	DNA	
	<213>	Artificial Sequence	
	<220>		
	<223>	Synthetic primer	
	<400>	303 aggtc accacactct ac	22
<u> </u>	55		22
Ō	<210>	304	
	<211>	24	
[] *_]	<212>	DNA	
the third that the transfer of the third that the t	<213>	Artificial Sequence	
s CT			
Han gray at the gray of the gr	<220>		
14 5.j	<223>	Synthetic primer	
þak Lad	<400>	304	0.4
	gcagac	cctc caggtctagg tgtg	24
	<210>	305	
	<211>	24	
	<212>	DNA	
	<213>	Artificial Sequence	
	<220>		
	<223>	Synthetic primer	
	<400>	305	
	gtctct	atgt caatggtttc accc	24
	<210>	306	

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic primer

<400> 306 tagctgctct ctgtccagtc c

21